

1/71

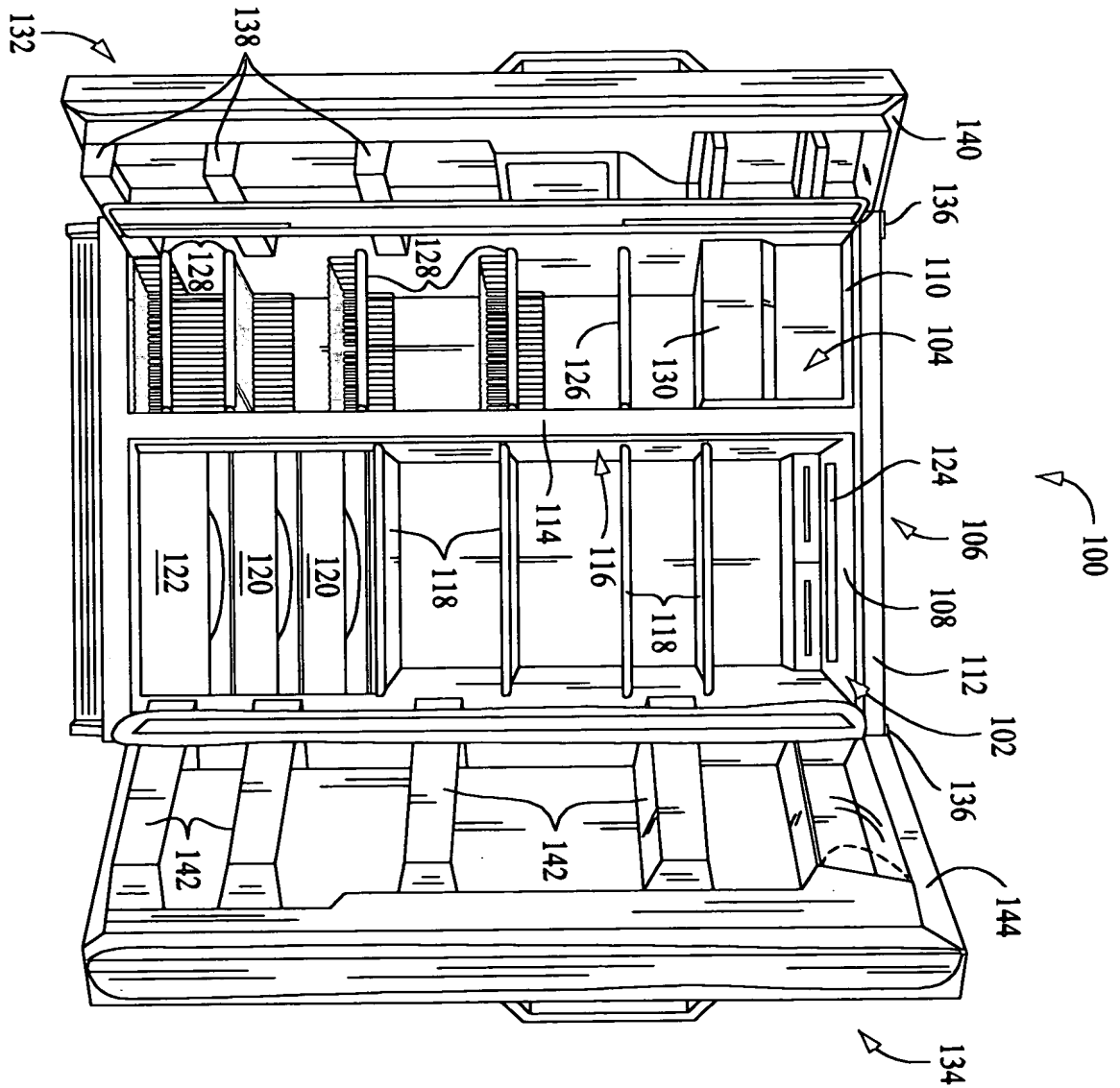


FIG. 1

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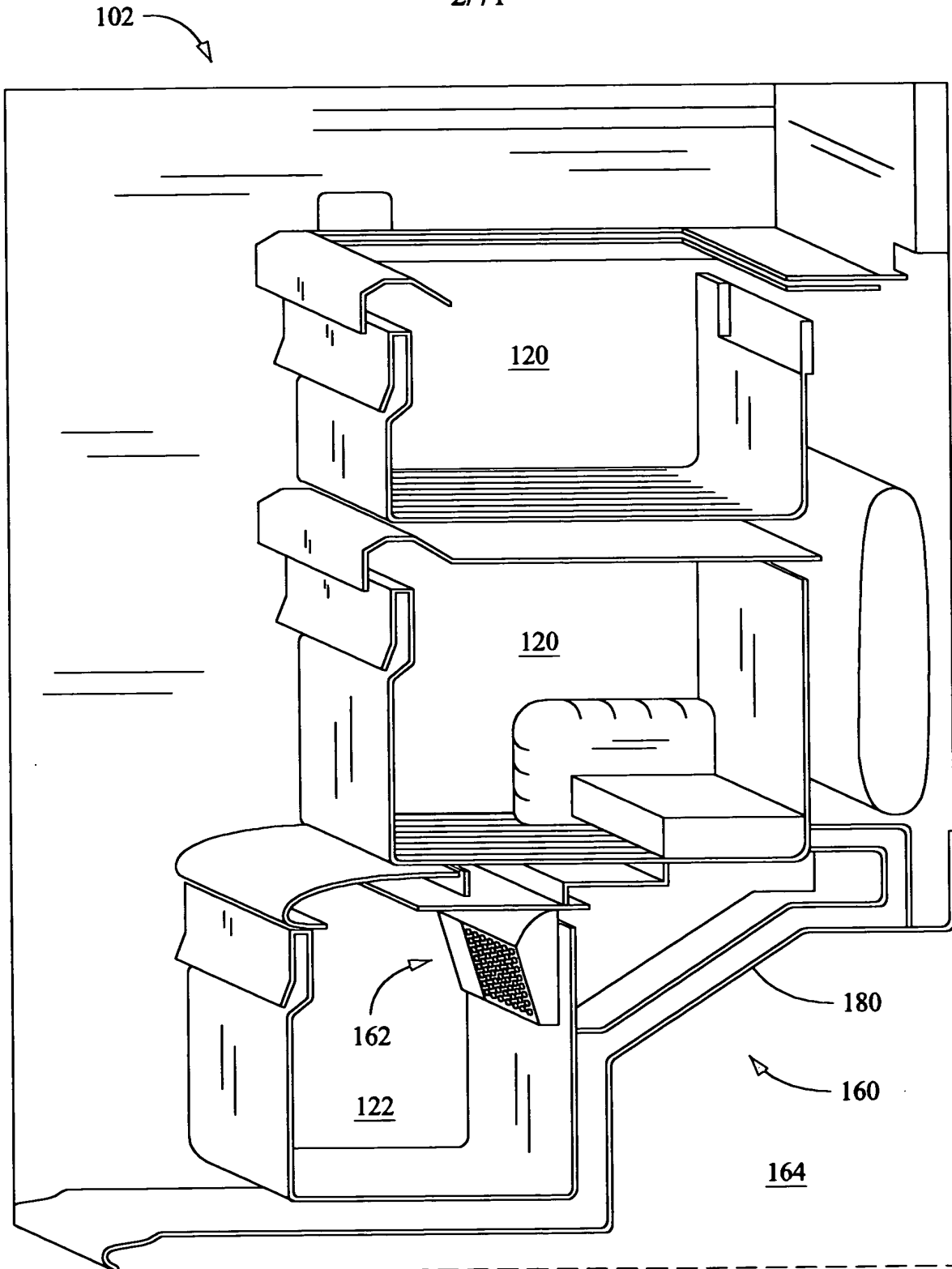


FIG. 2

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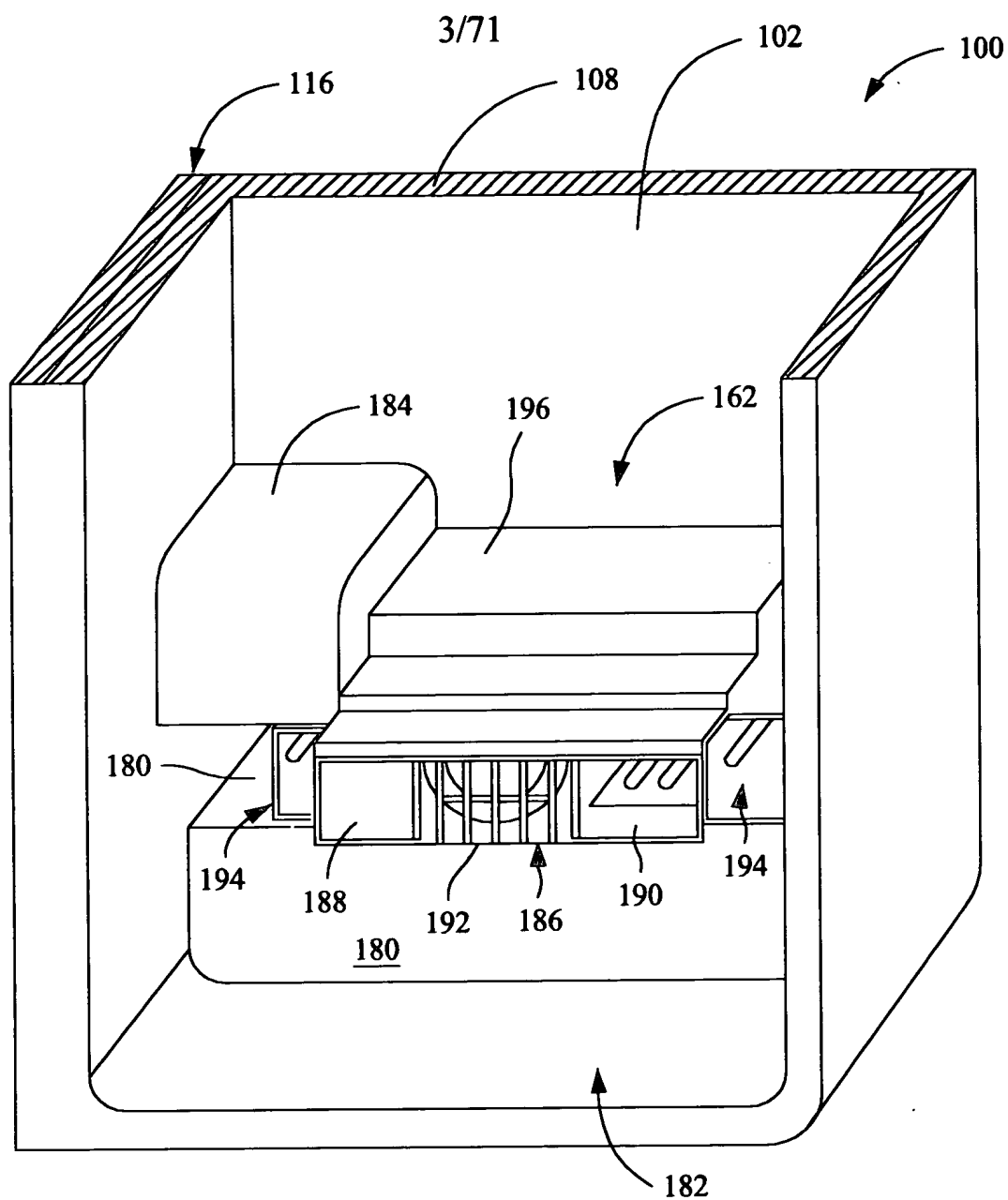


FIG. 3

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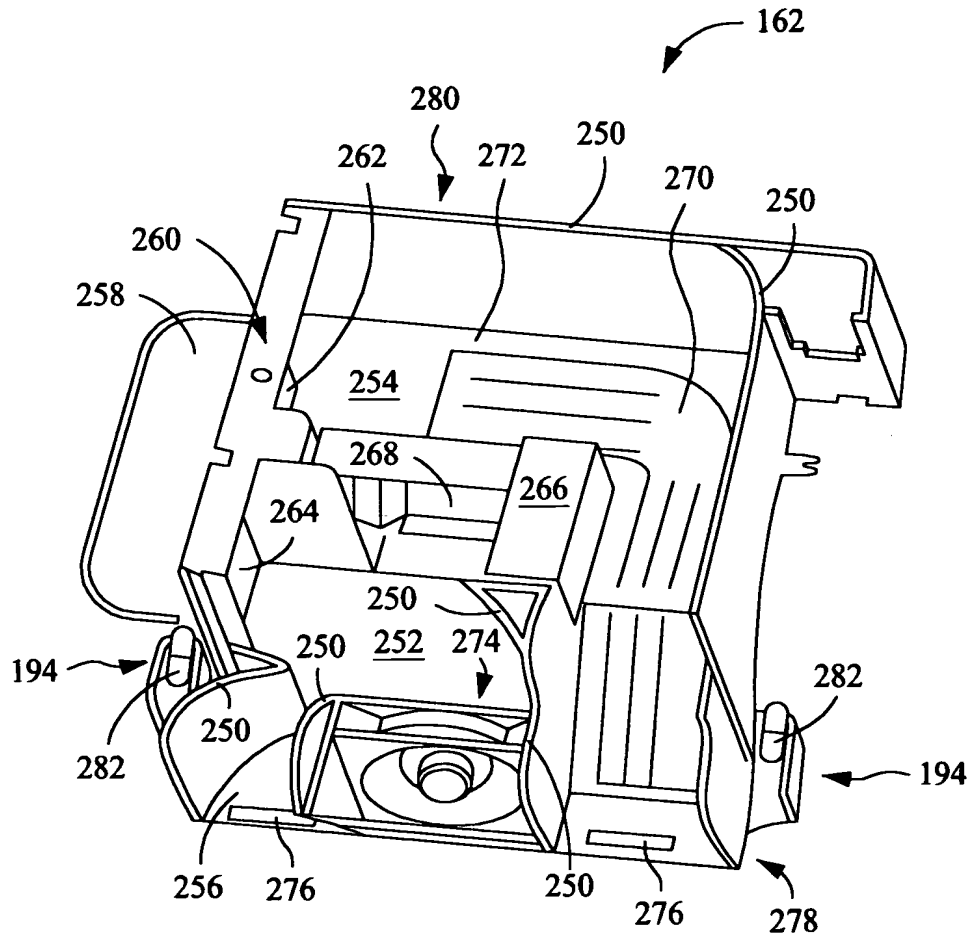


FIG. 4

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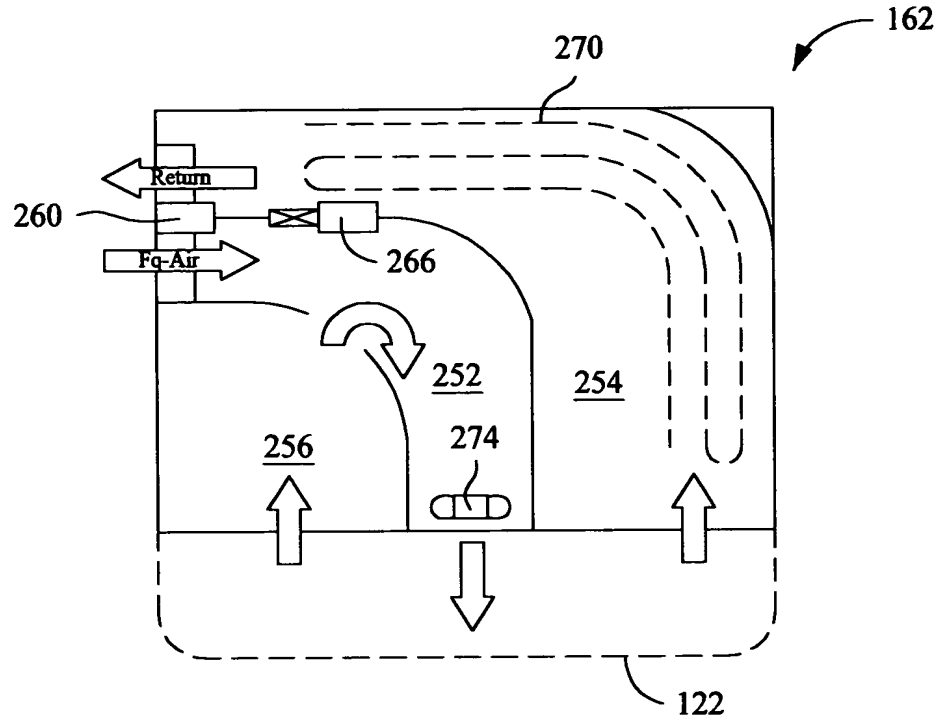


FIG. 5

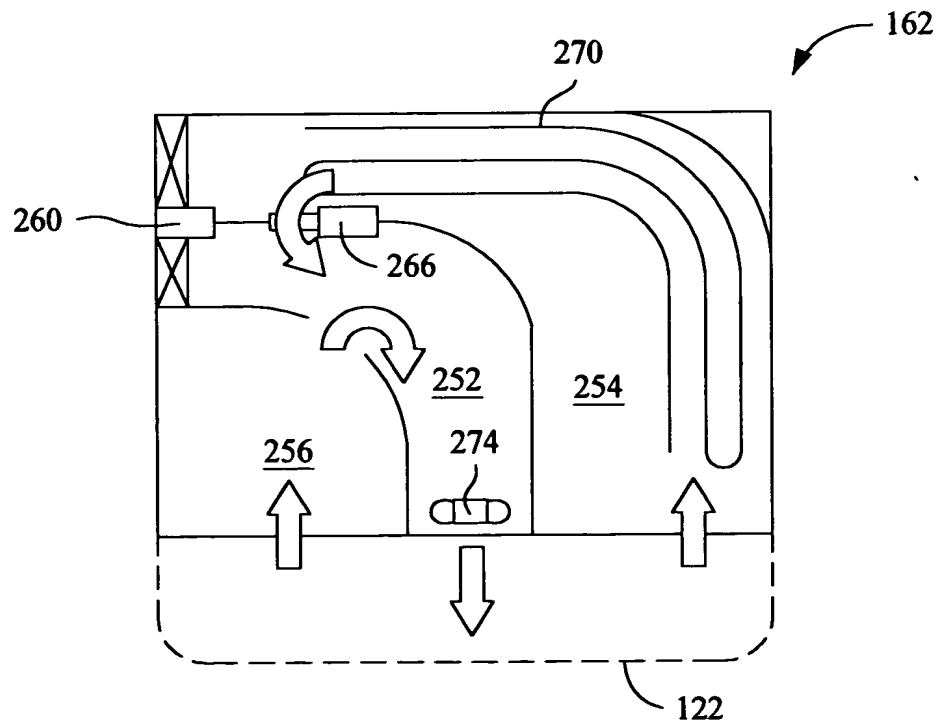


FIG. 6

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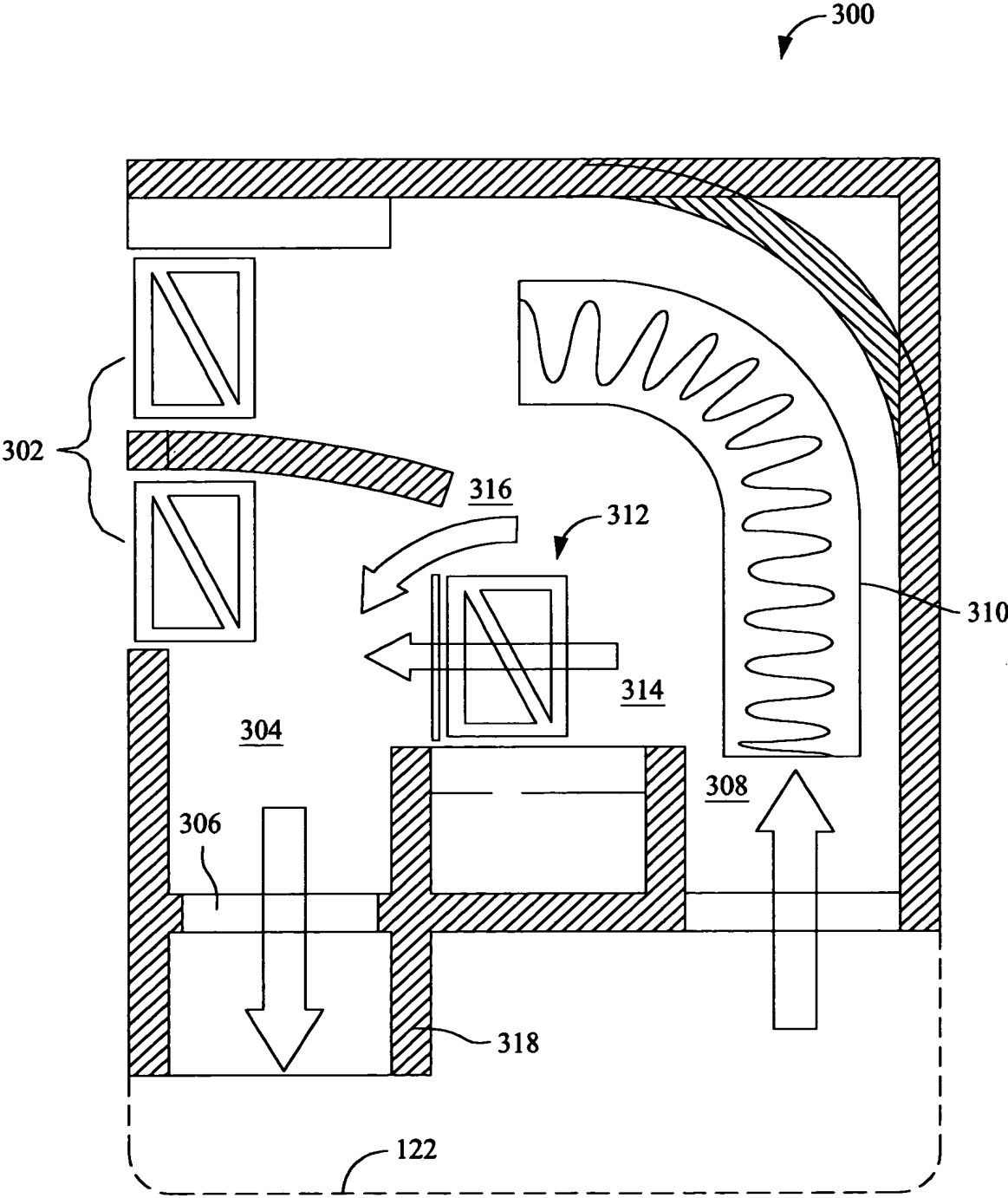


FIG. 7

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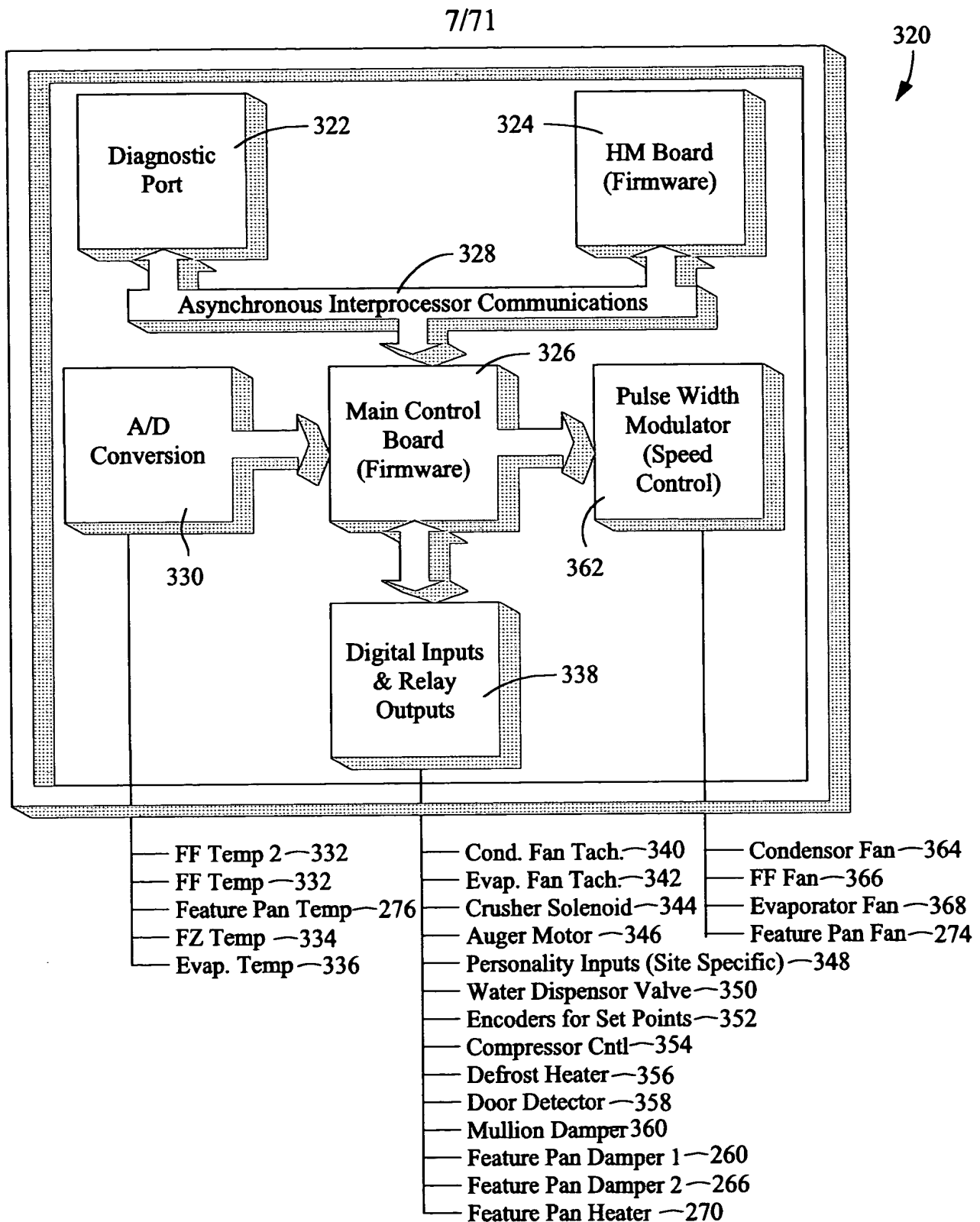
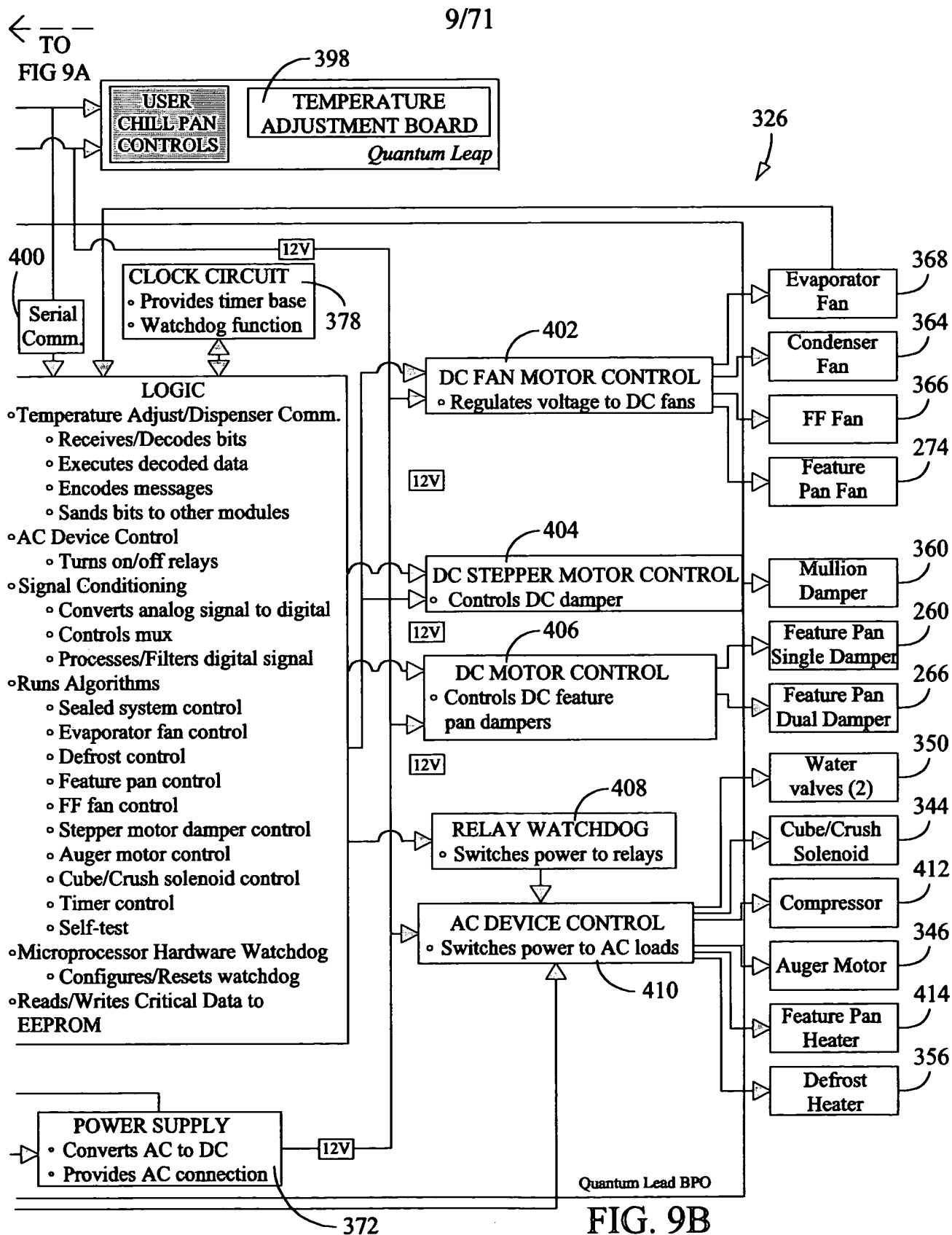


FIG. 8





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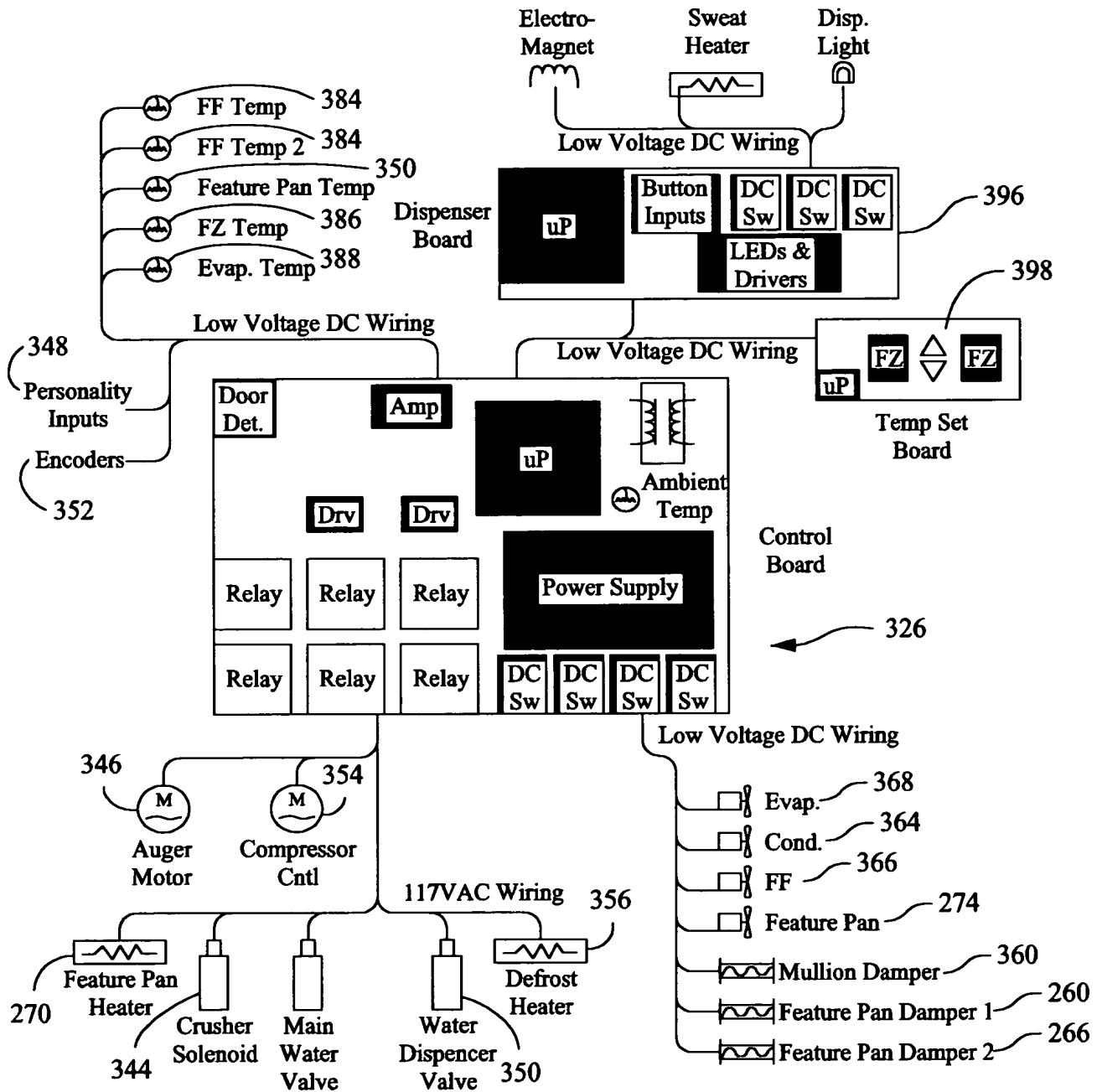


FIG. 10

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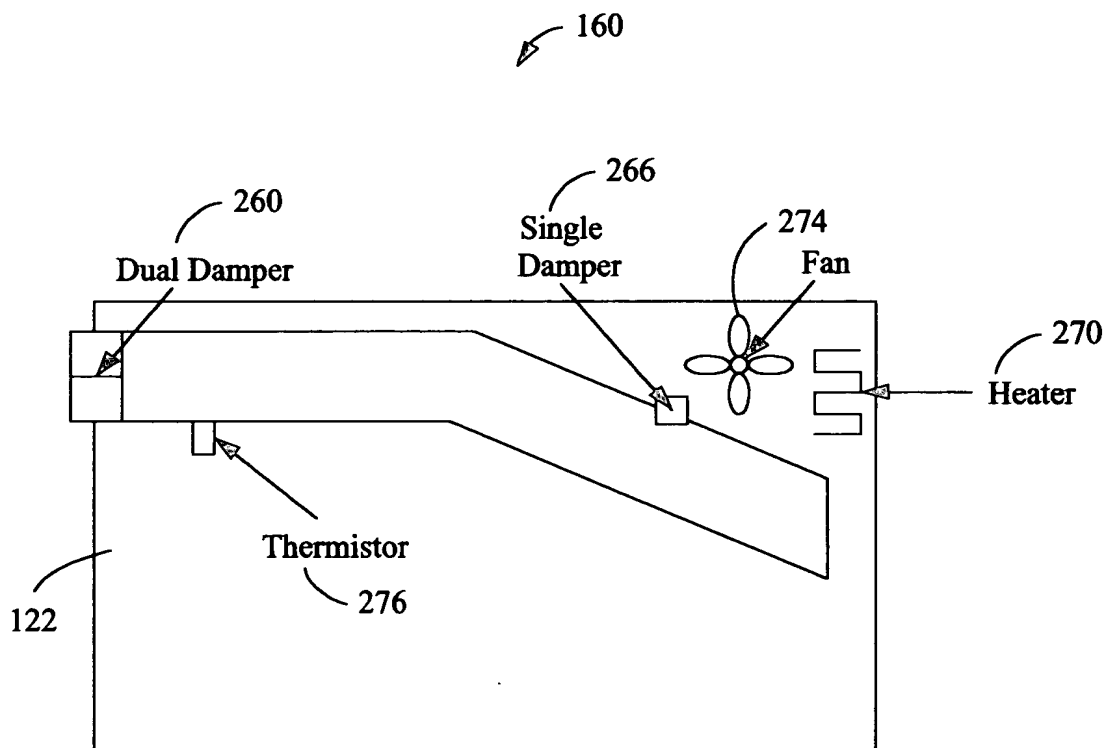


FIG. 11

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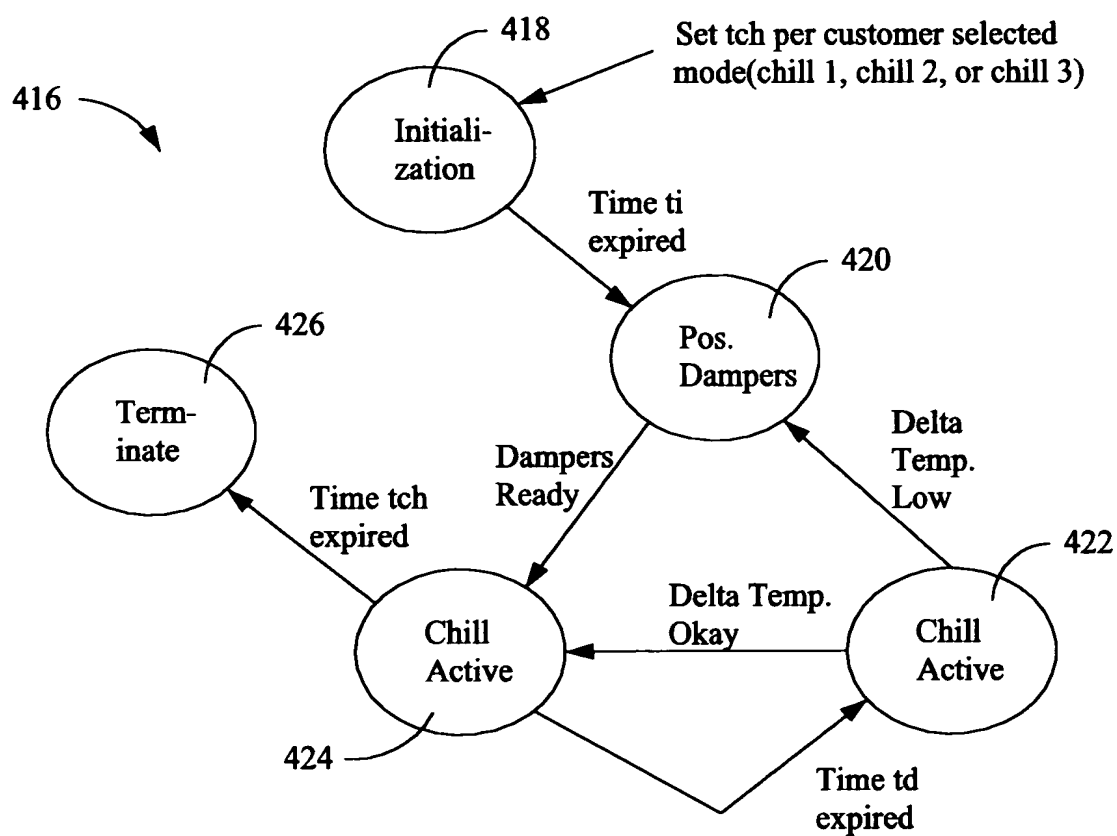
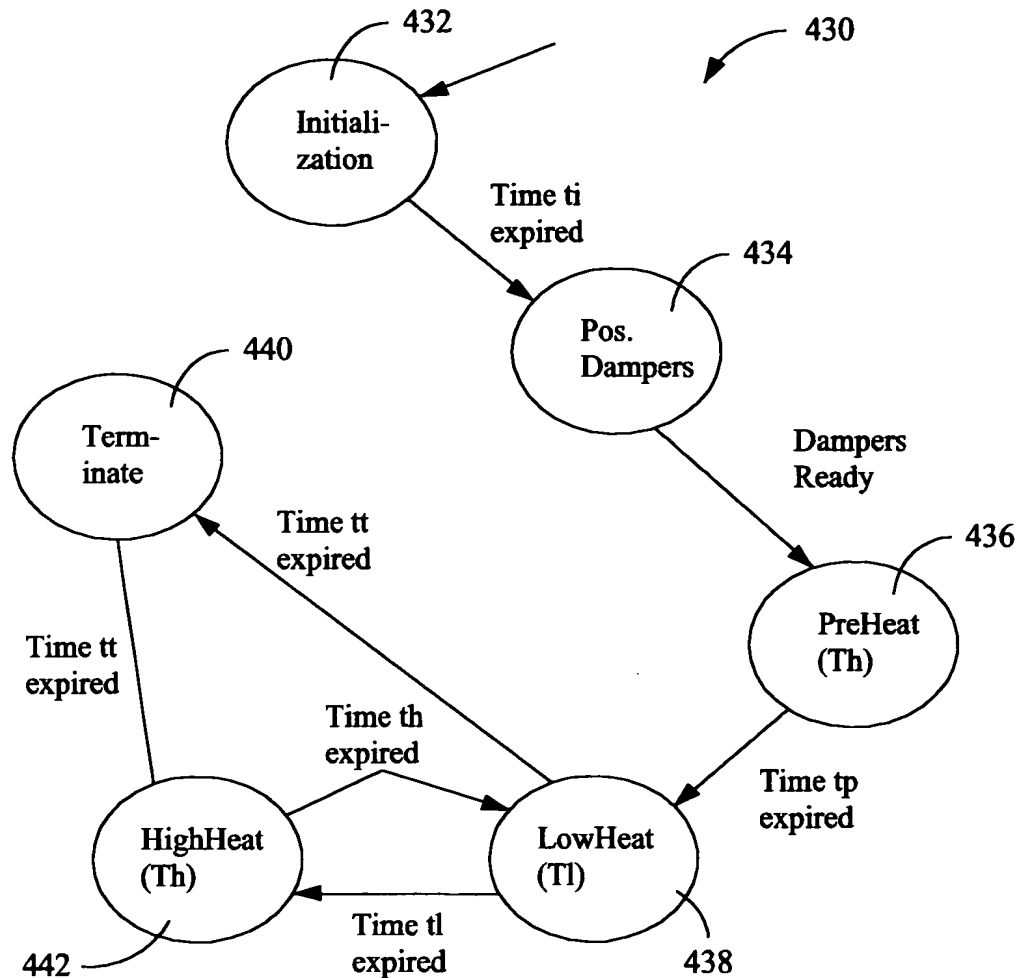


FIG. 12

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Initialization: Shuts off heater and turns on fan. This mode is implemented so that the customer interface LED that is wired in parallel with the fan will turn on as soon as the button is hit. Time ti is the initialization time and will typically be approximately one minute.

Pos. Dampers: This state shuts off the fan, sets the single damper open then closes the dual damper. It then turns the fan back on. This is done for power management

PreHeat: This state regulates the pan temperature

LowHeat

HighHeat:

Terminate: This mode closes both dampers and shuts off the fan then returns to idle.

FIG. 13

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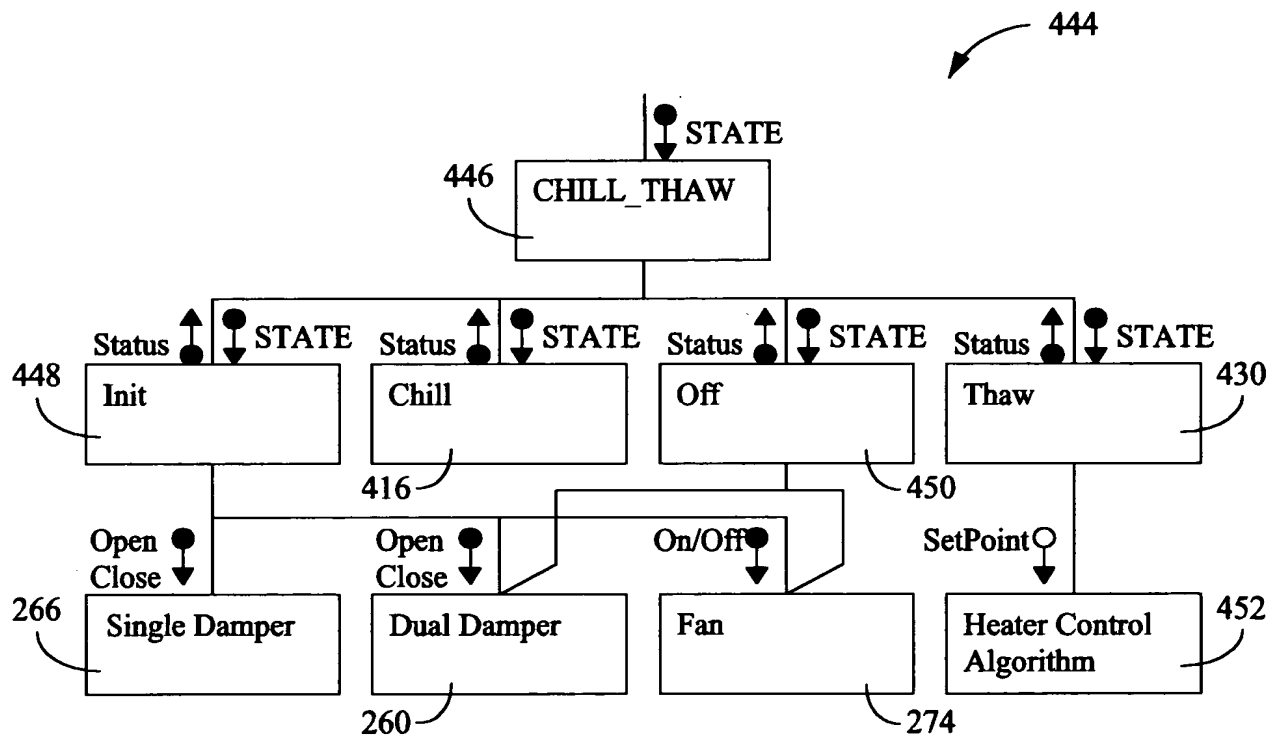


FIG. 14

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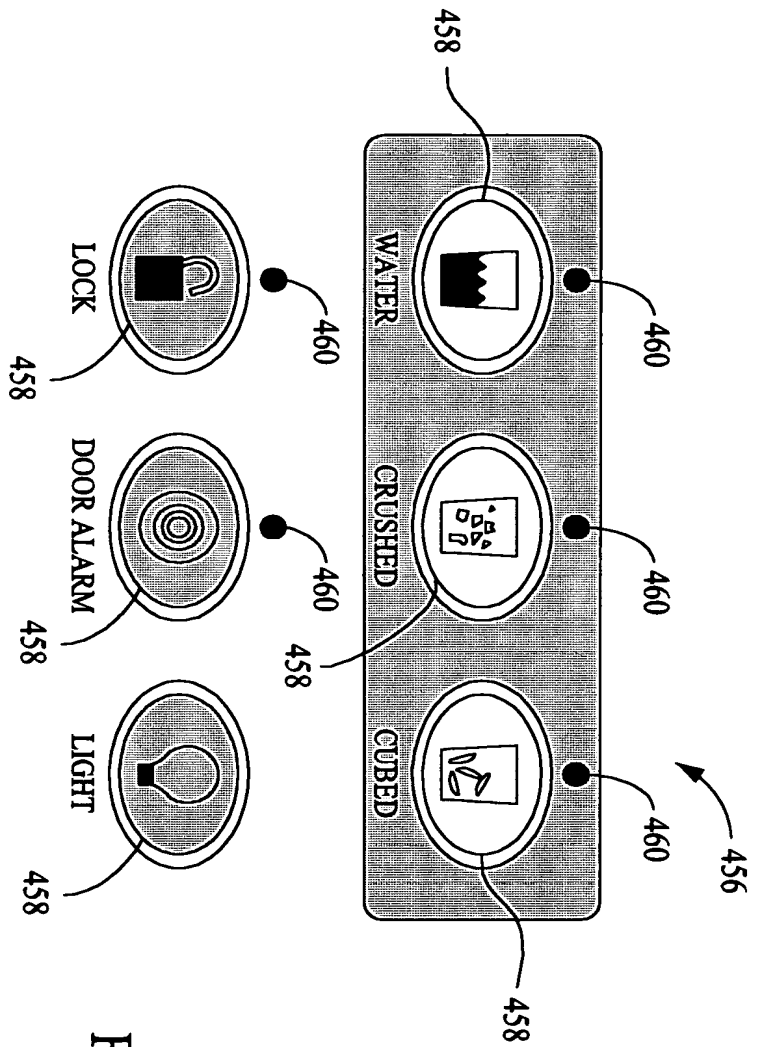


FIG. 15

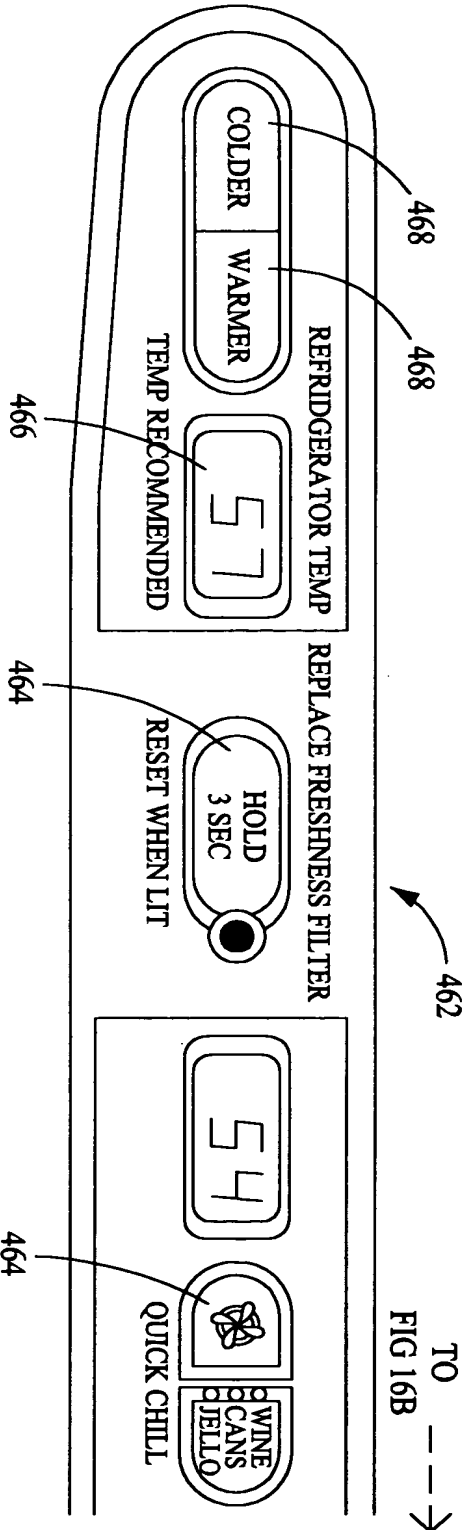


FIG. 16A

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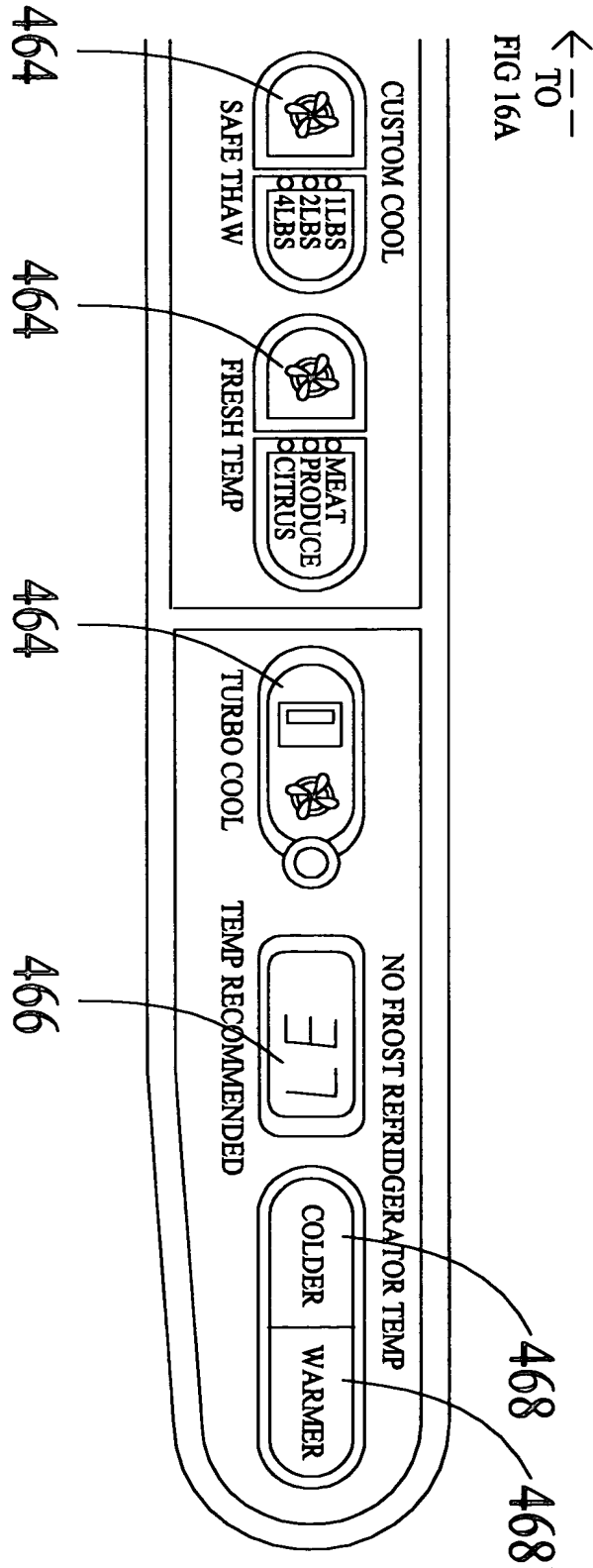


FIG. 16B

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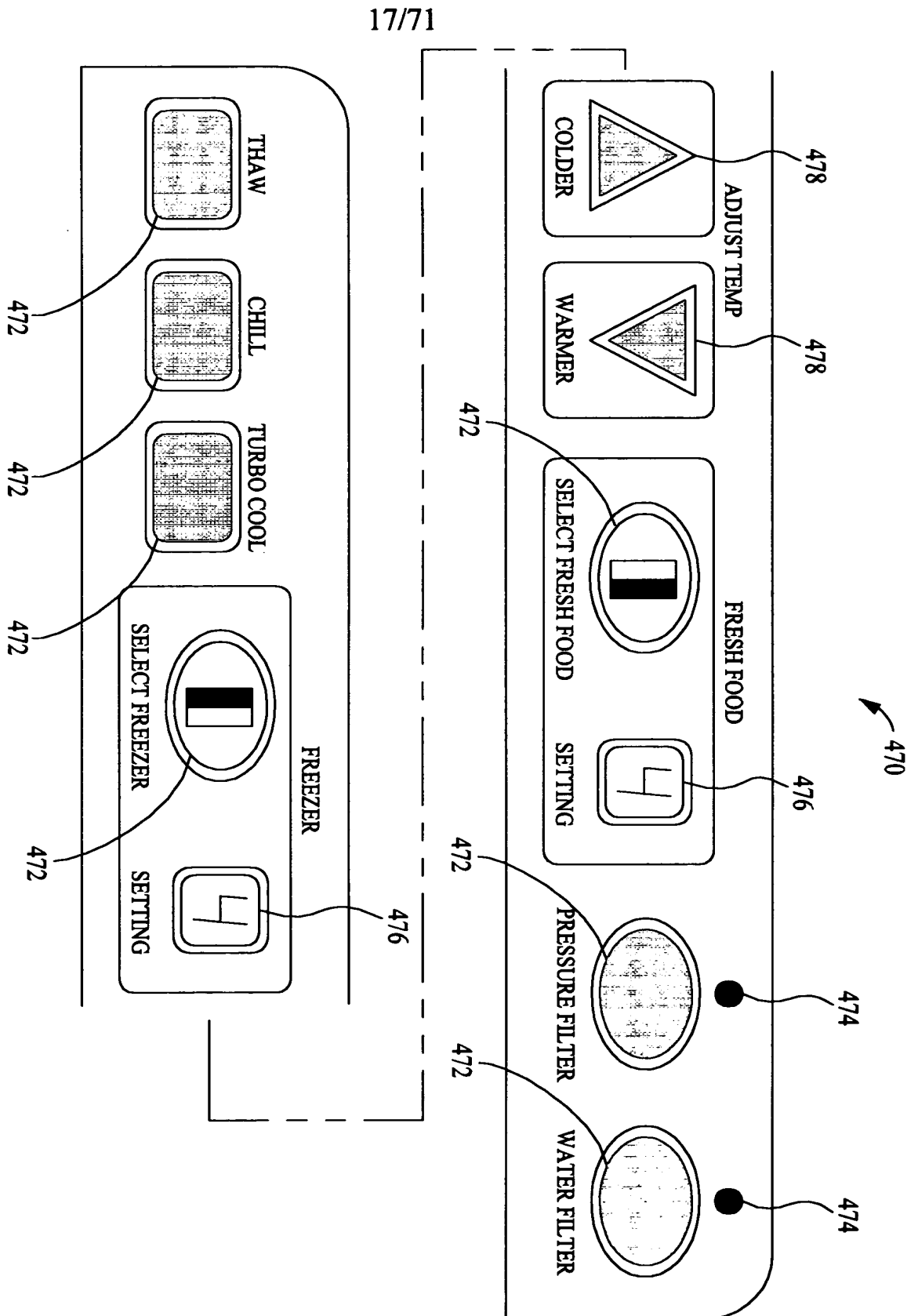


FIG. 17

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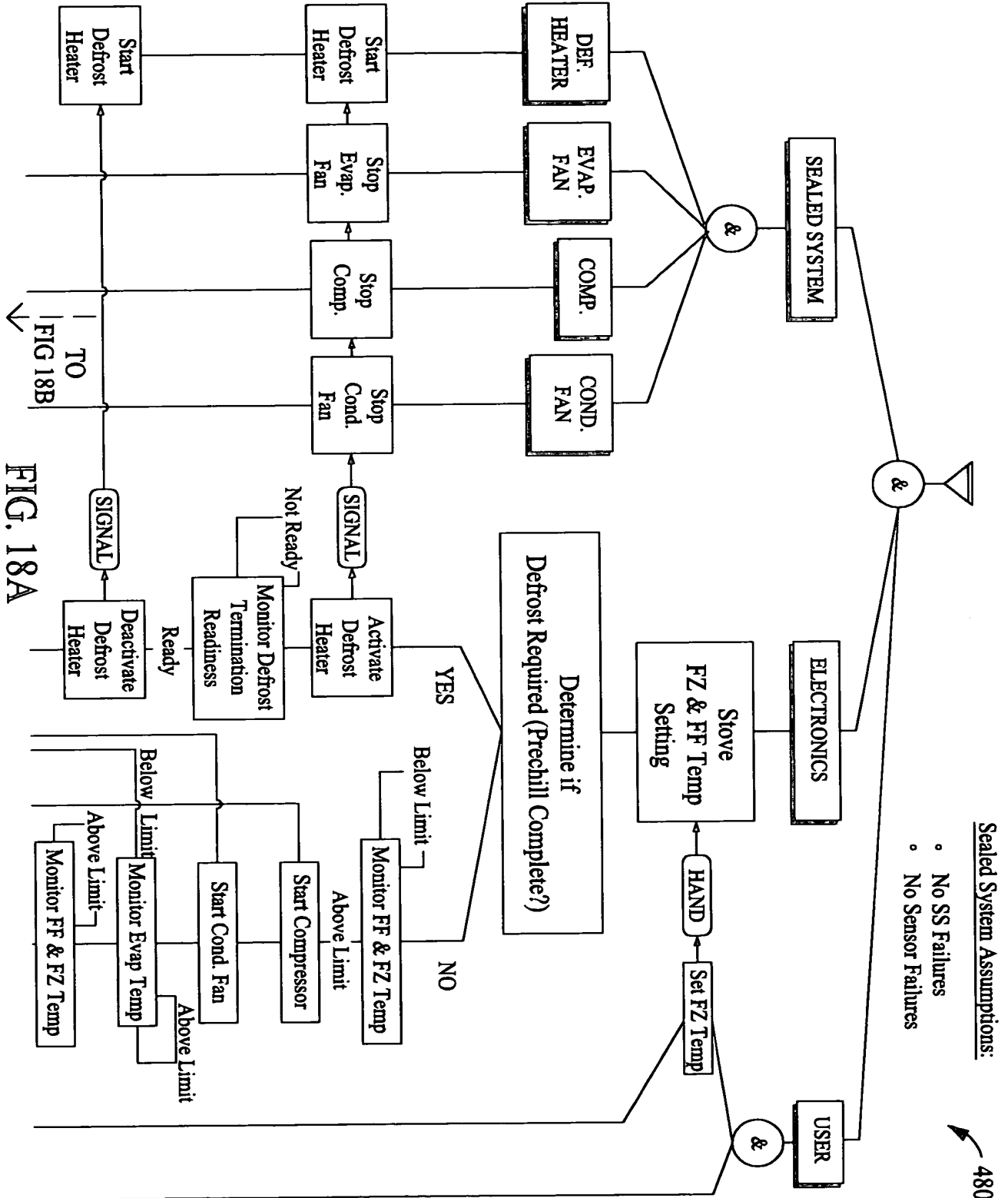
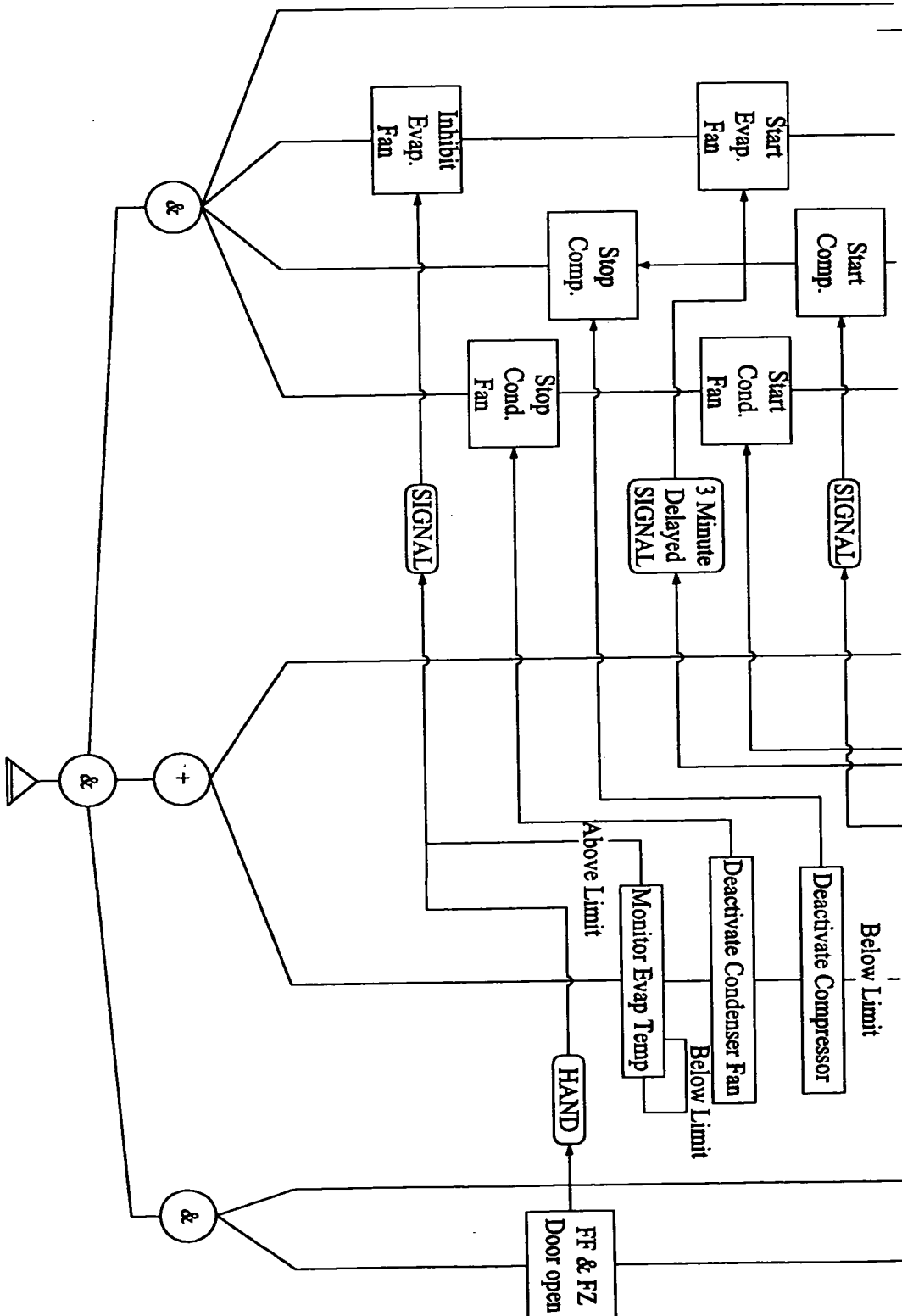


FIG. 18A

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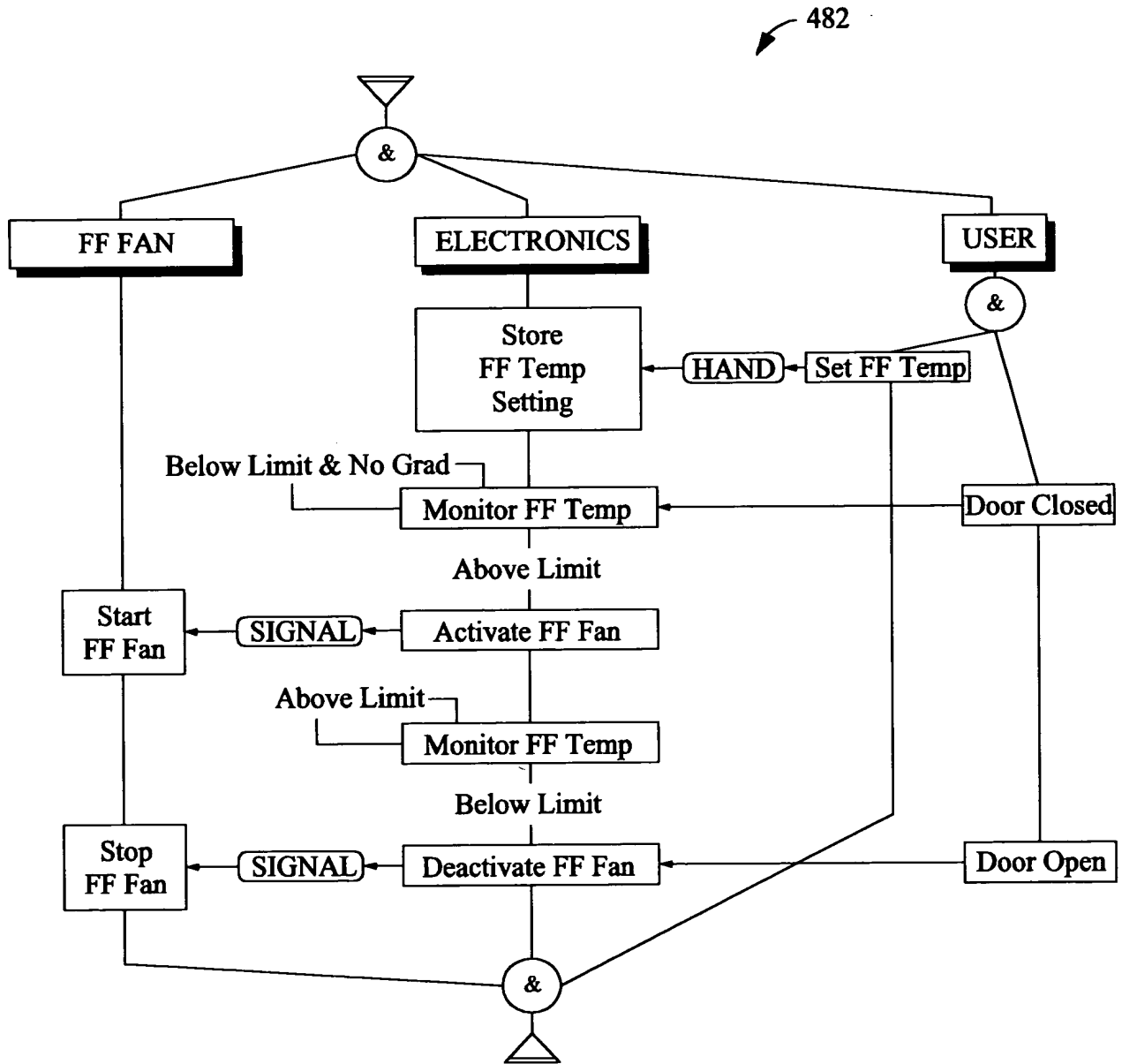
TO
 FIG 18A



Sealed System Behavior Diagram

FIG. 18B

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Fresh Food Fan Behavior Diagram

FIG. 19

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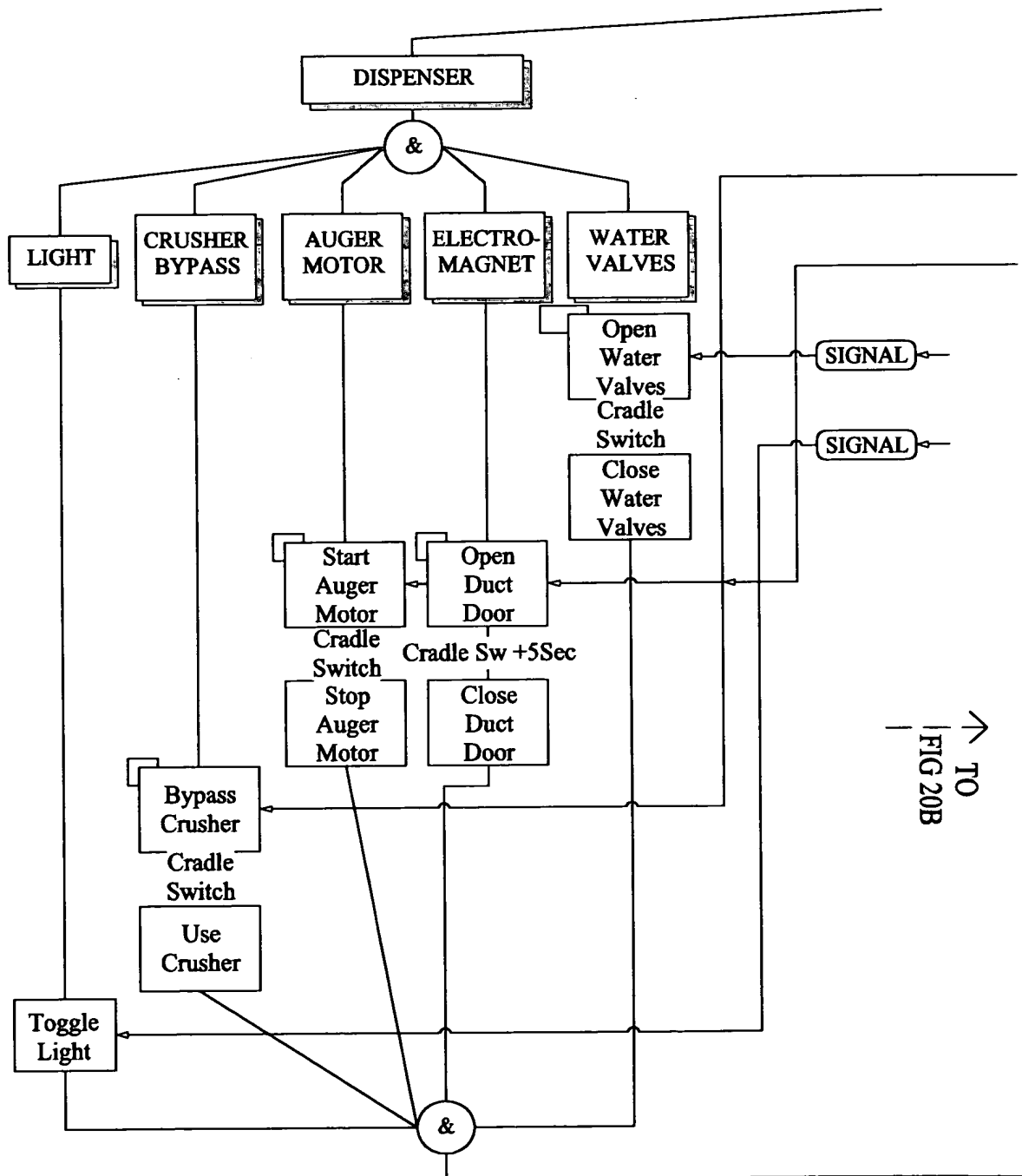


FIG. 20A

Dispenser Behavior

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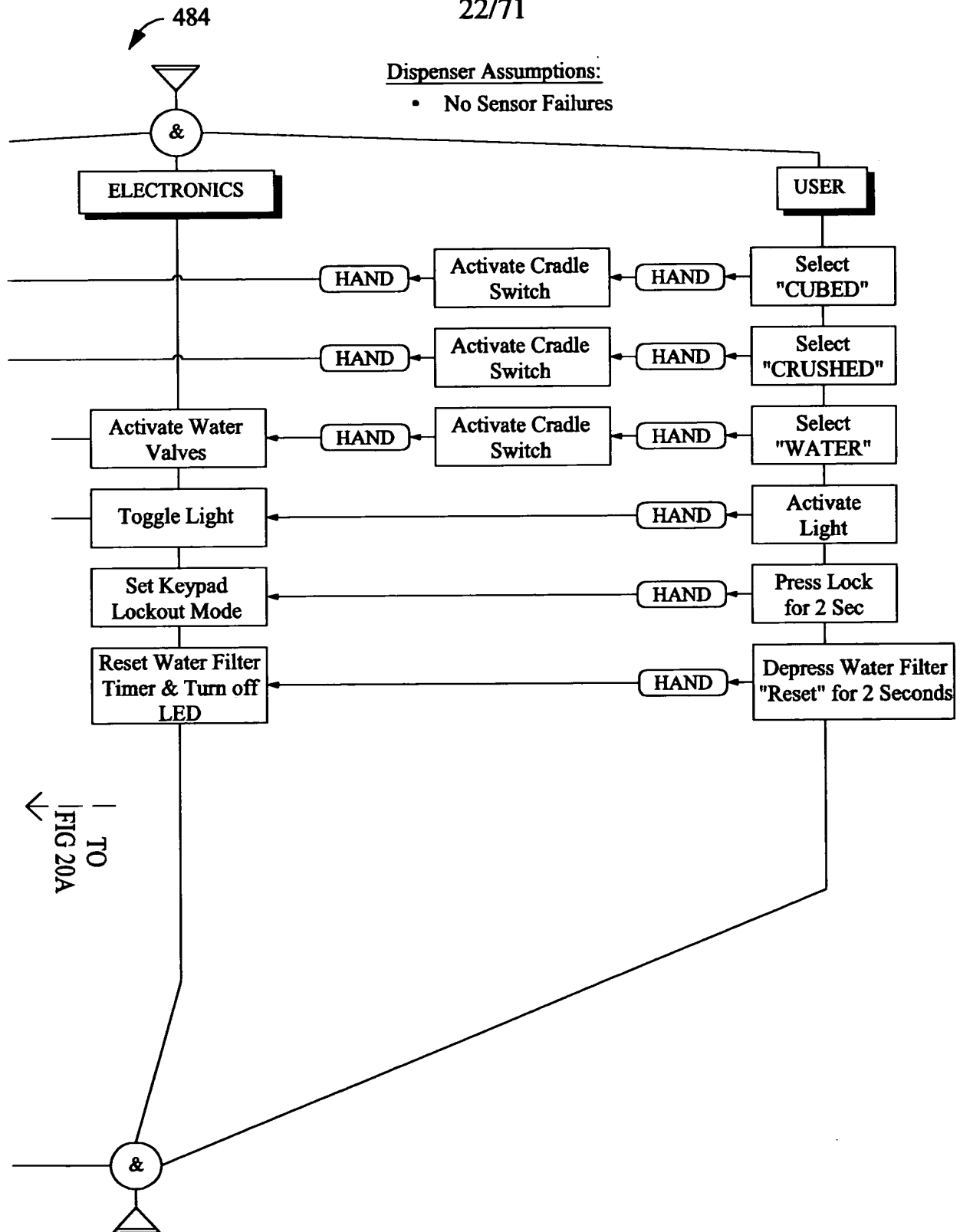


FIG. 20B

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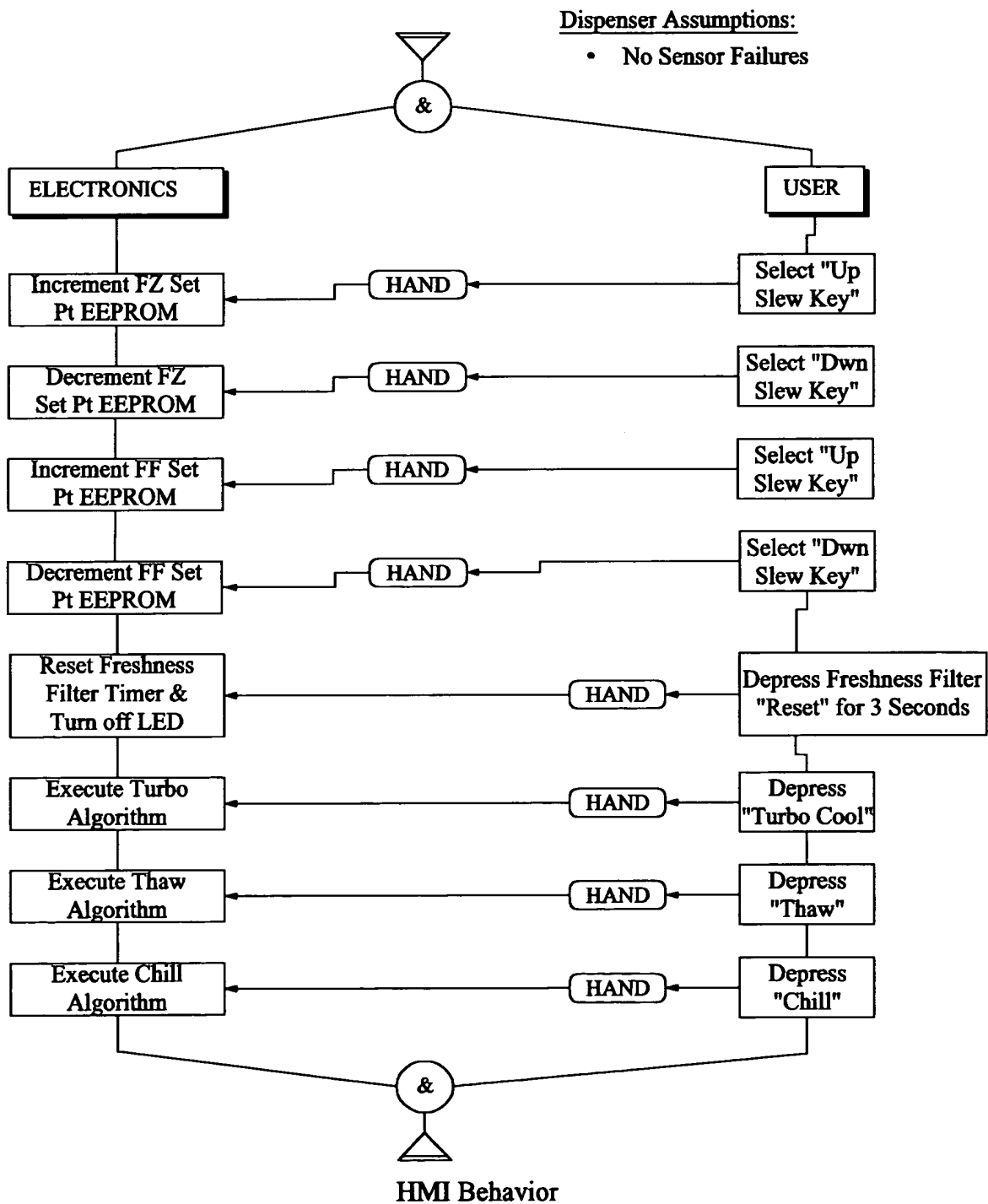
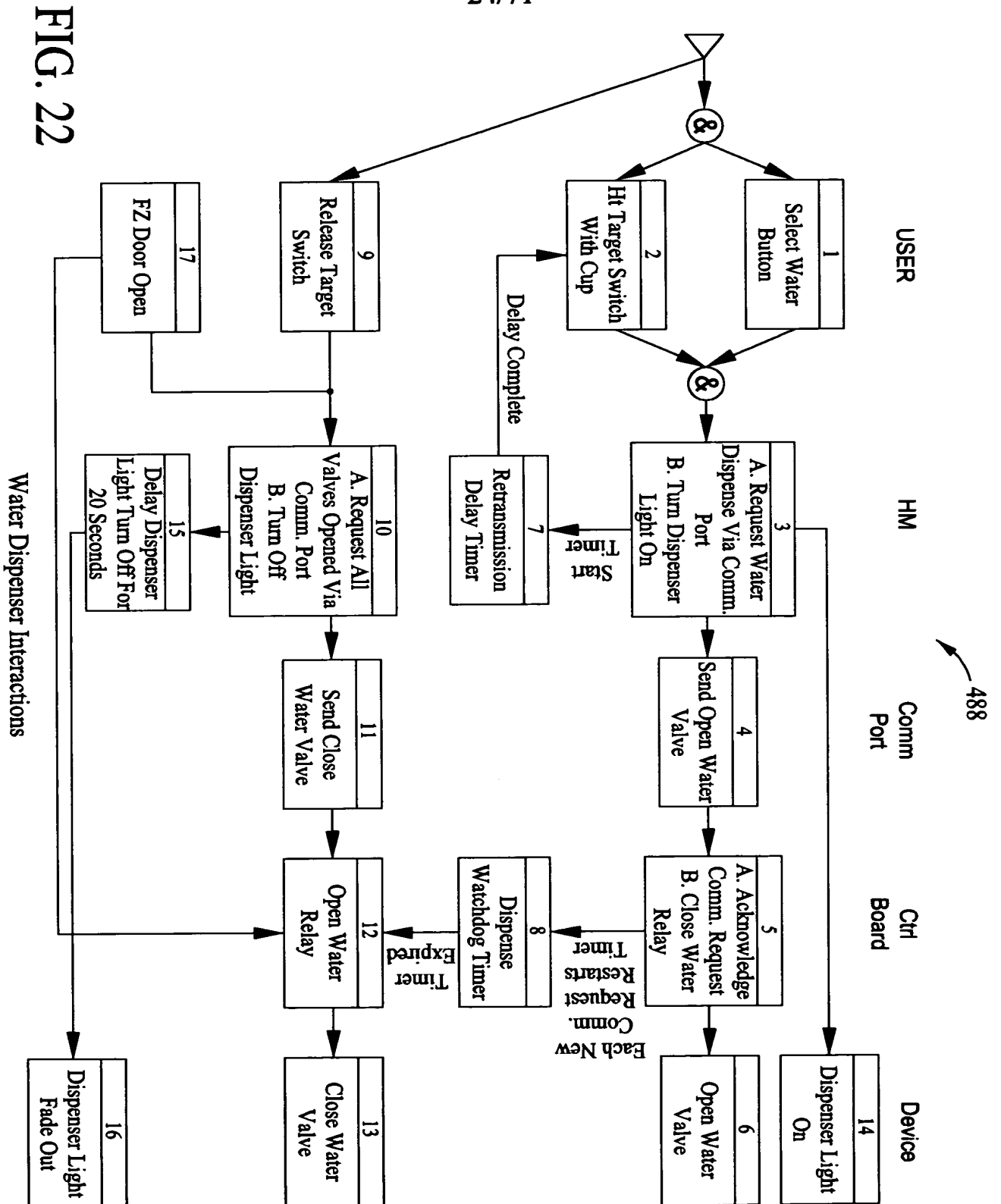
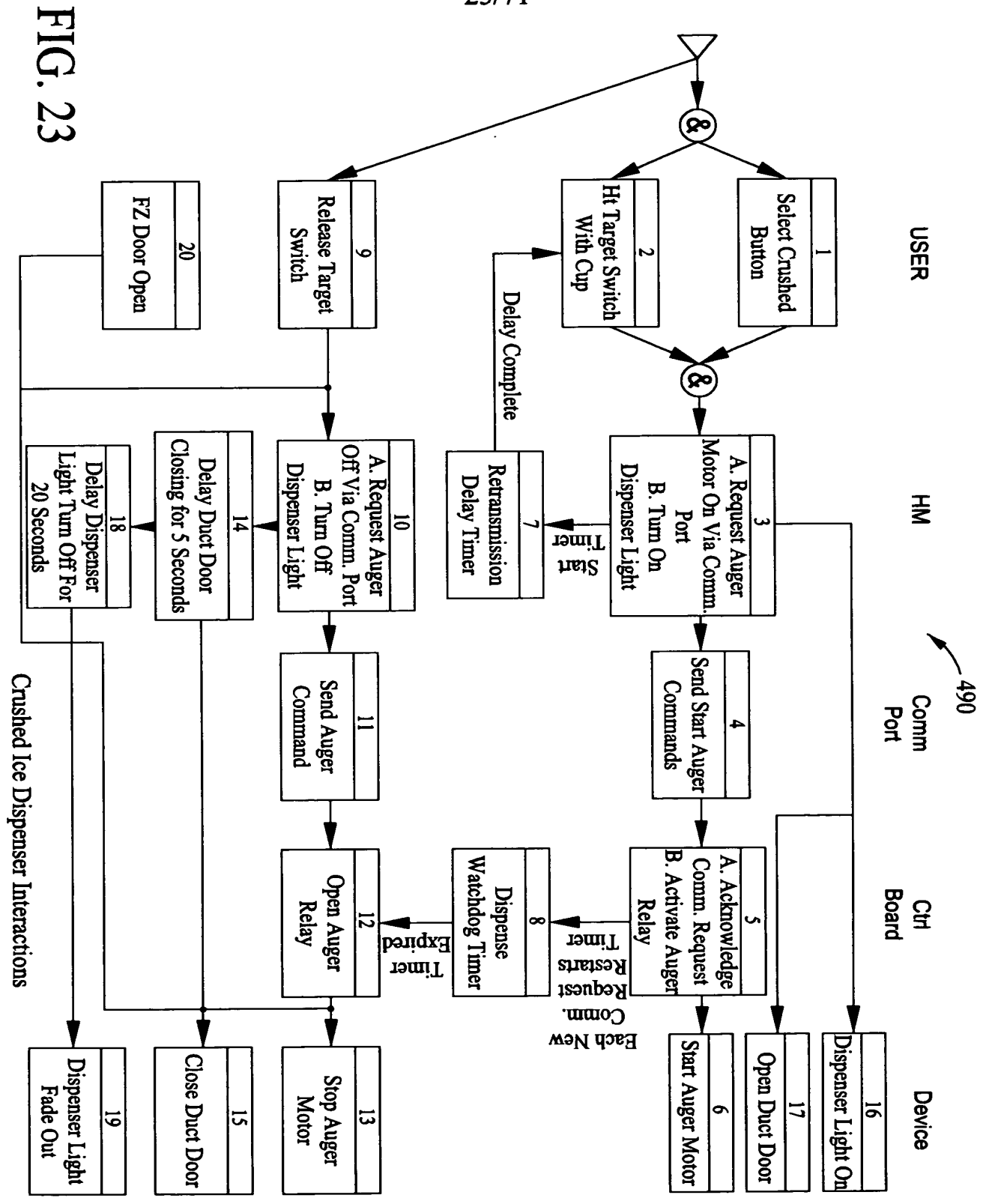


FIG. 21

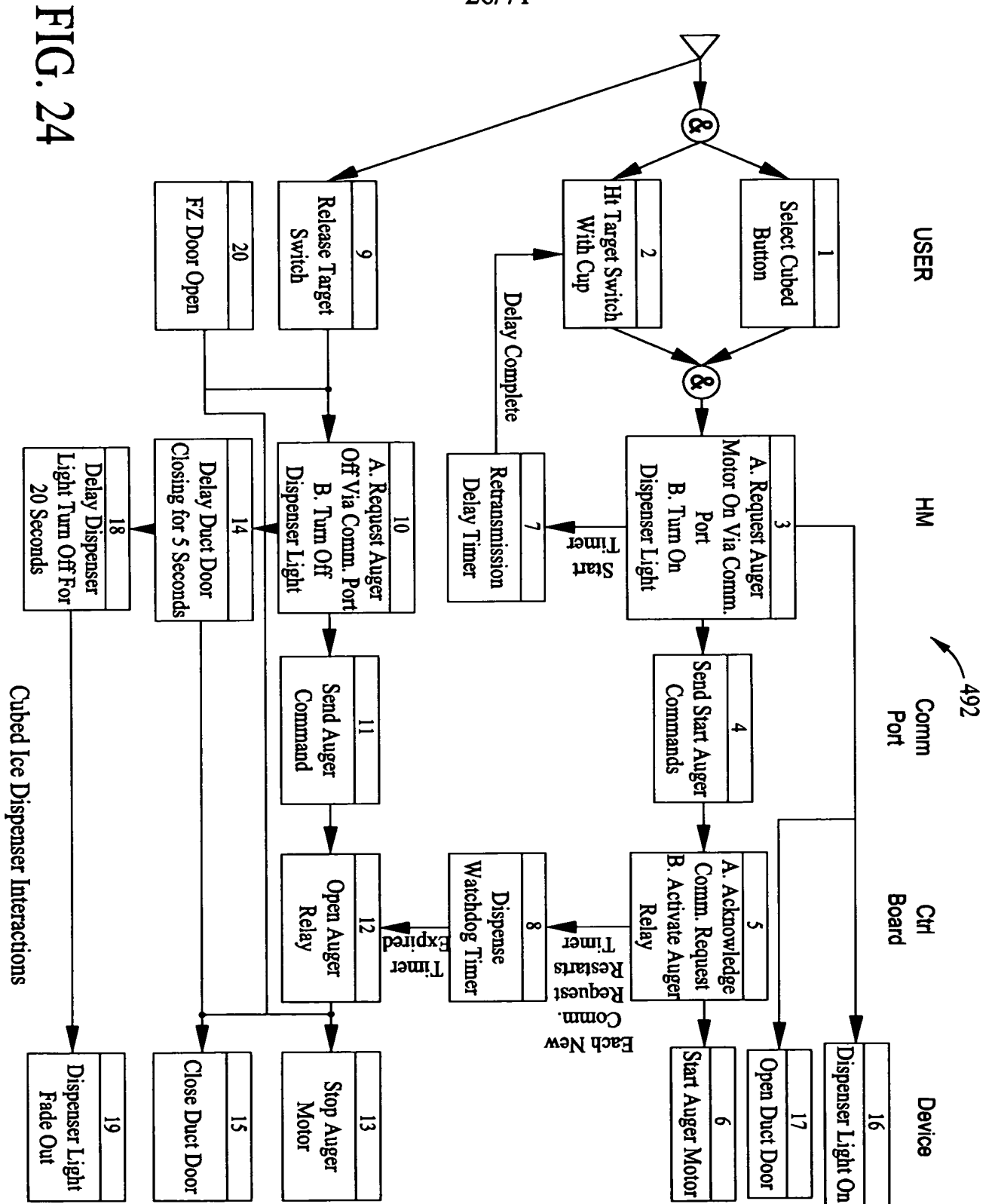
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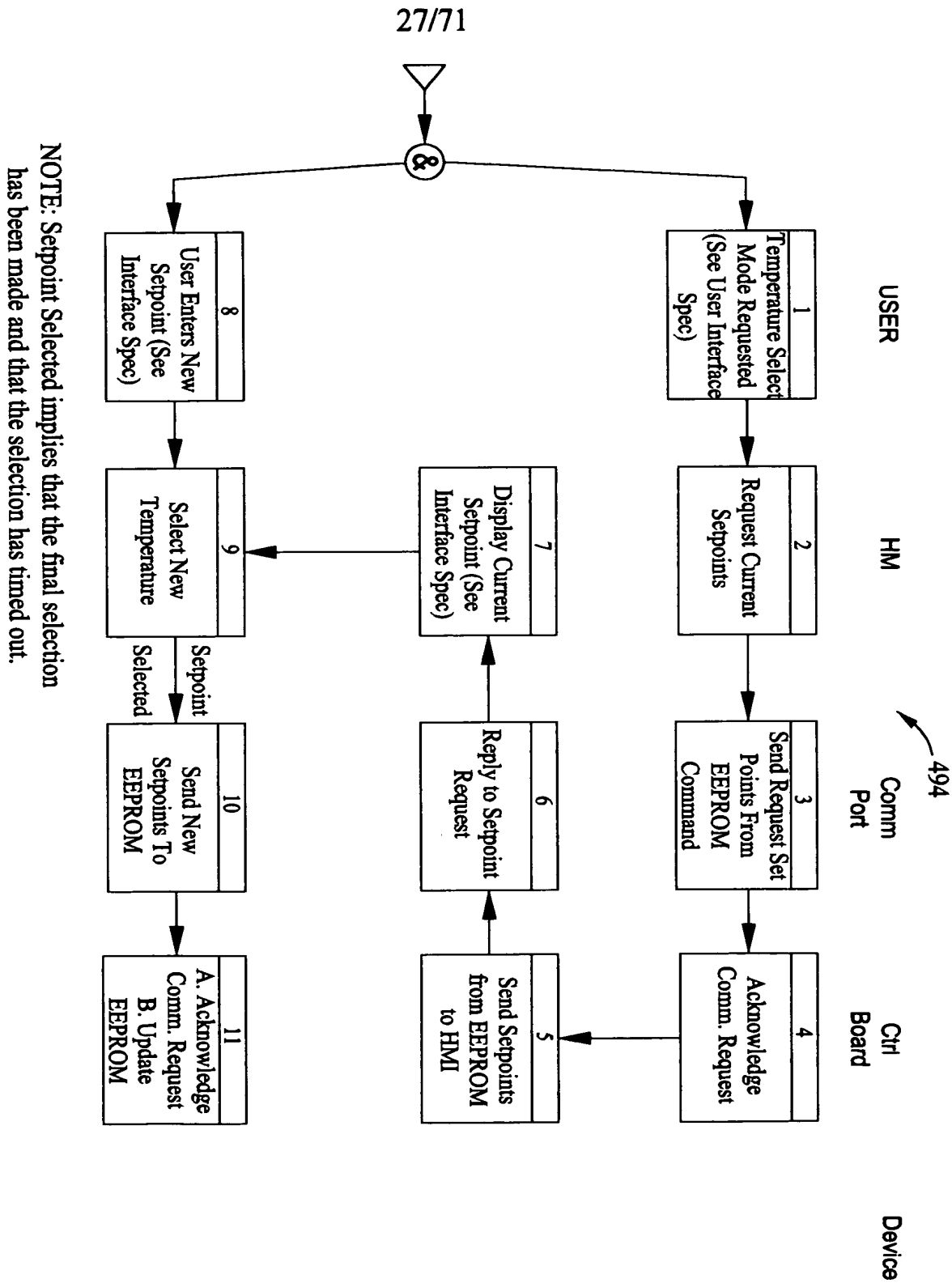
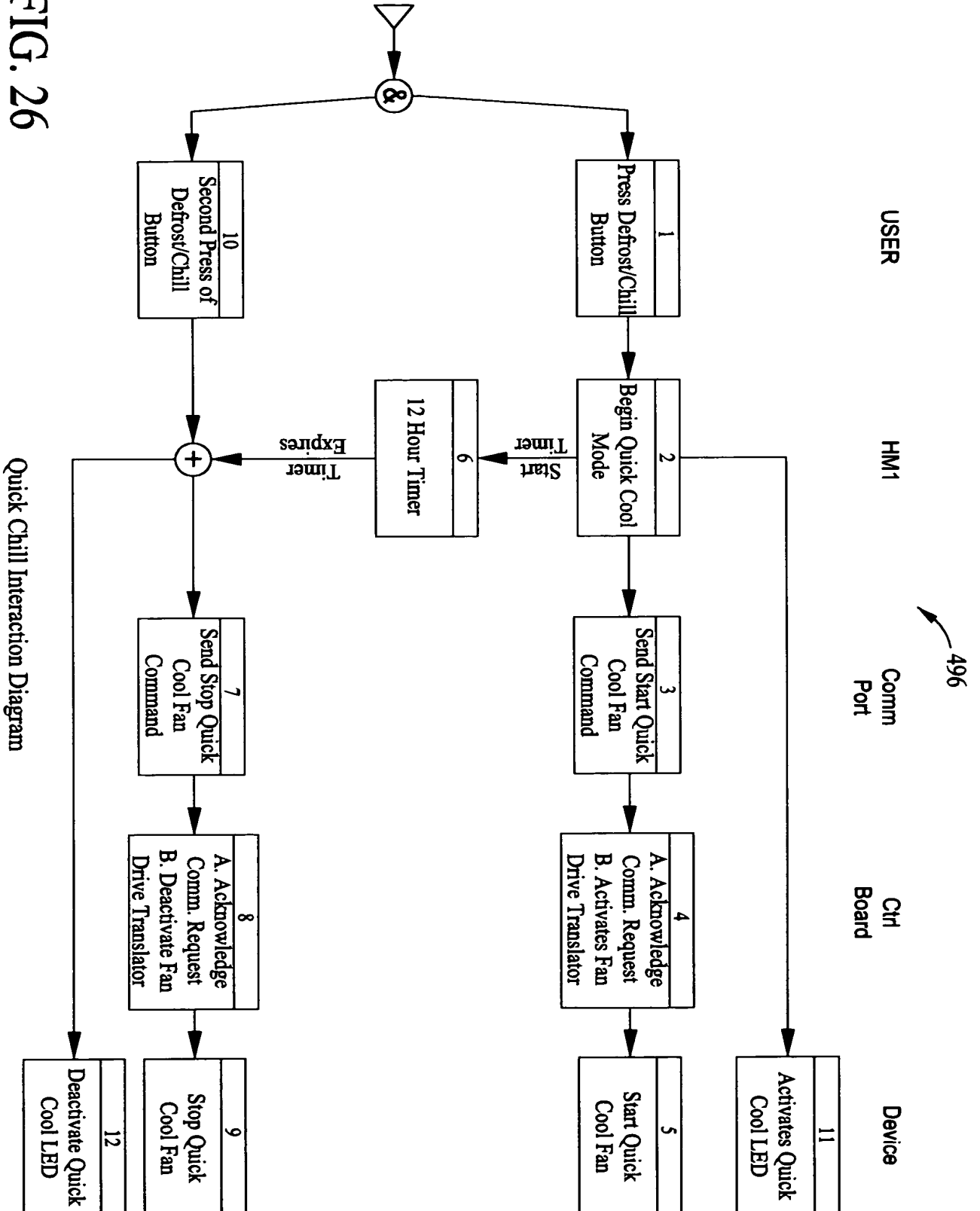


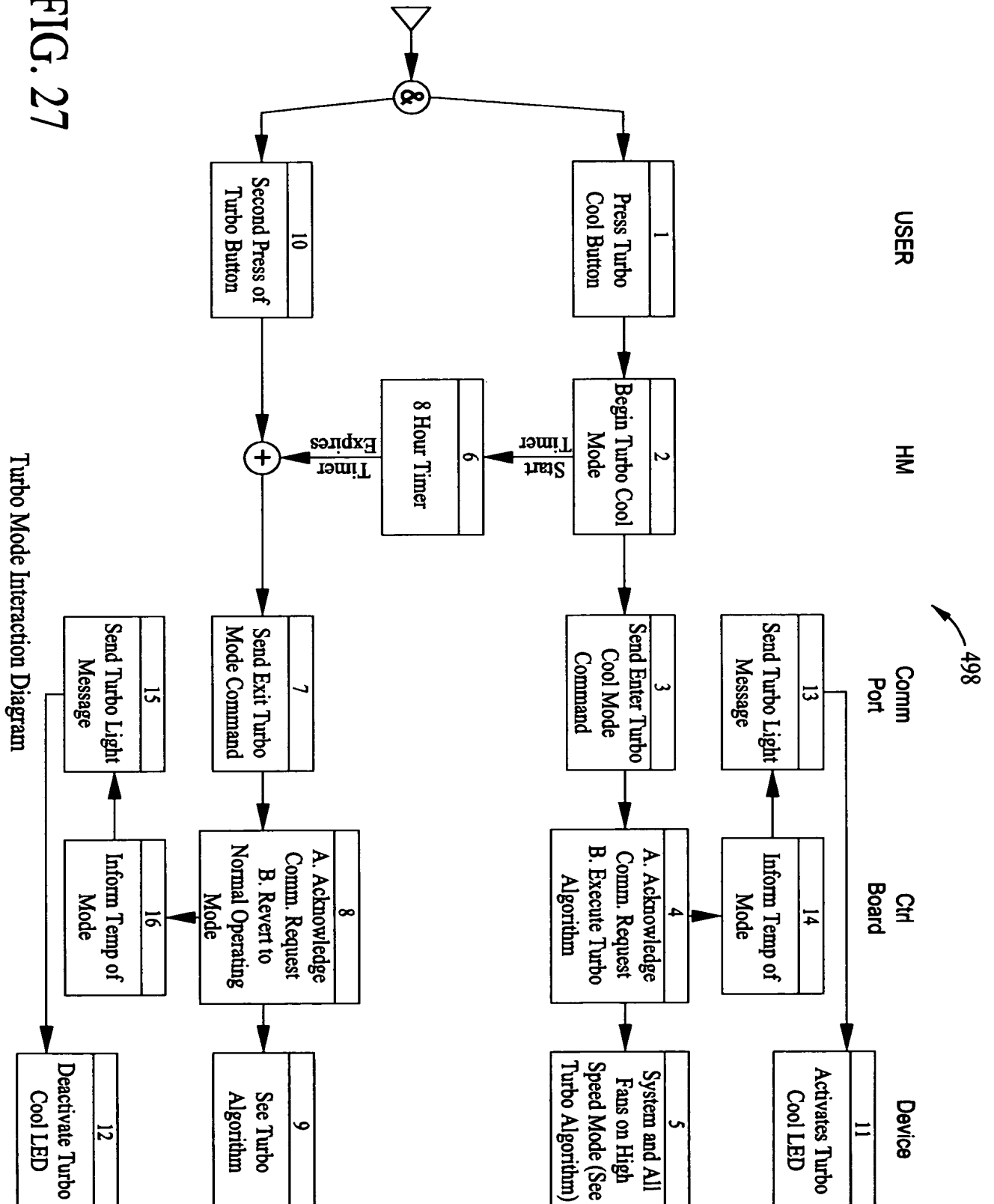
FIG. 25

Temperature Setting Interaction Diagrams

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FIG. 26





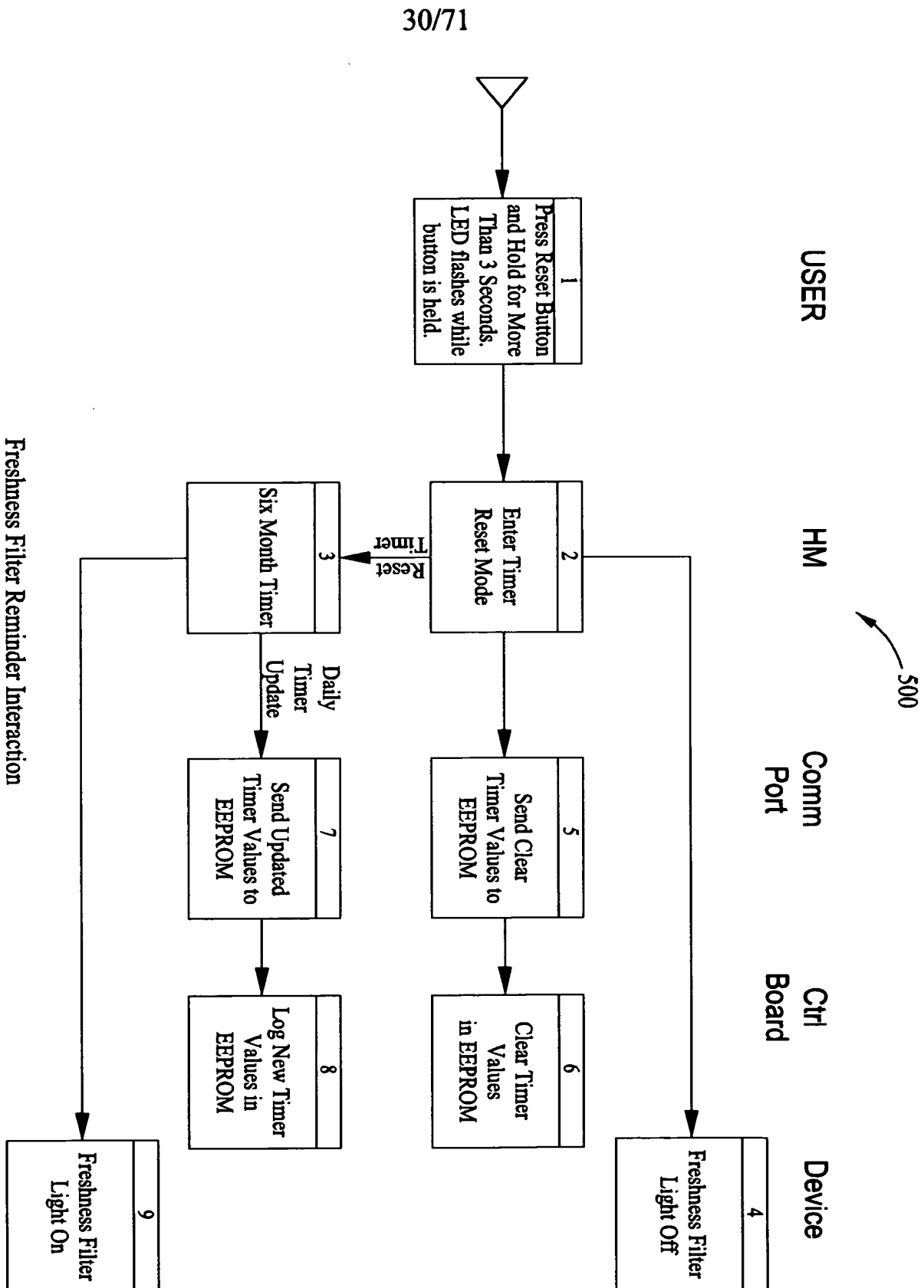
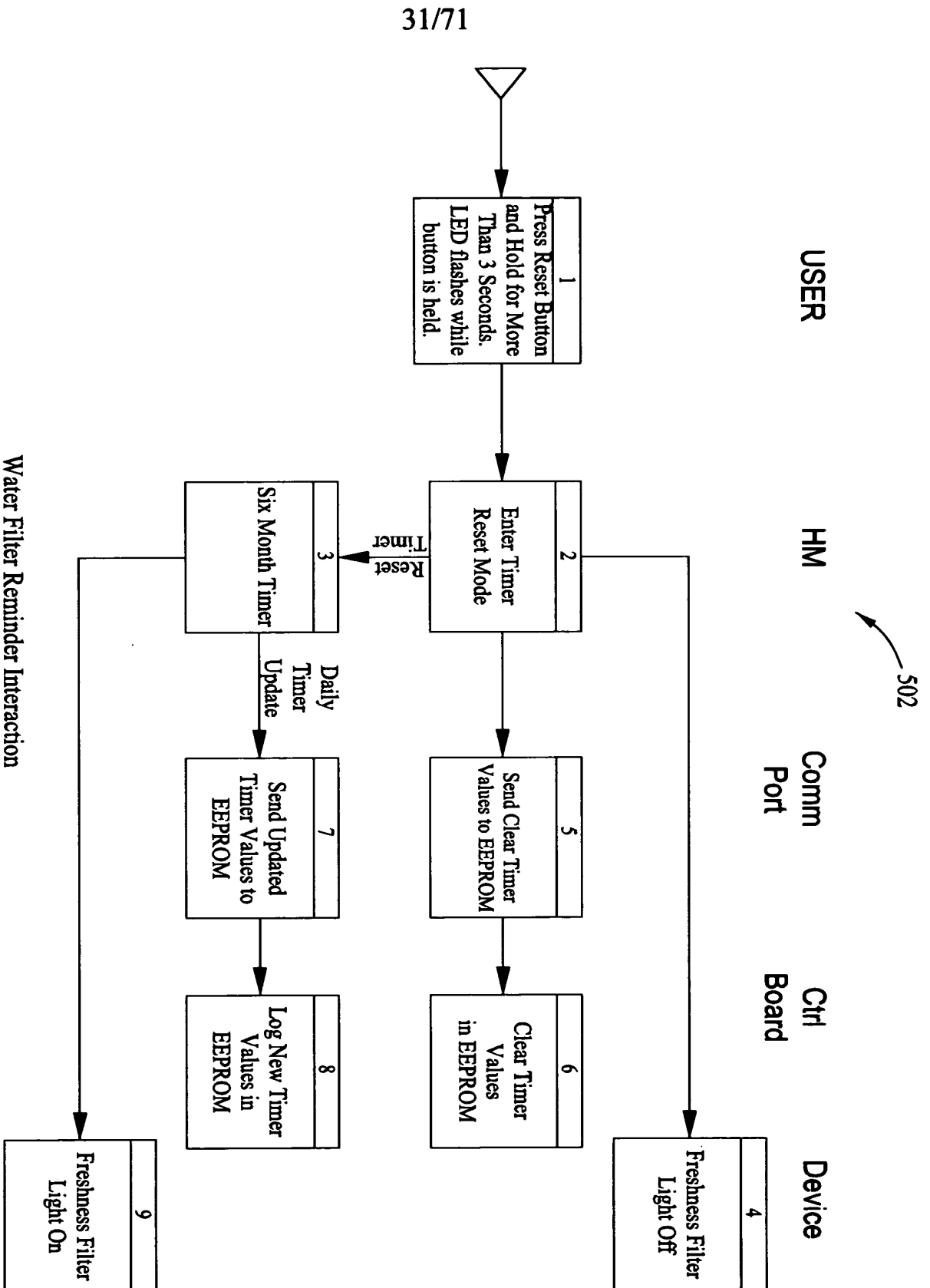
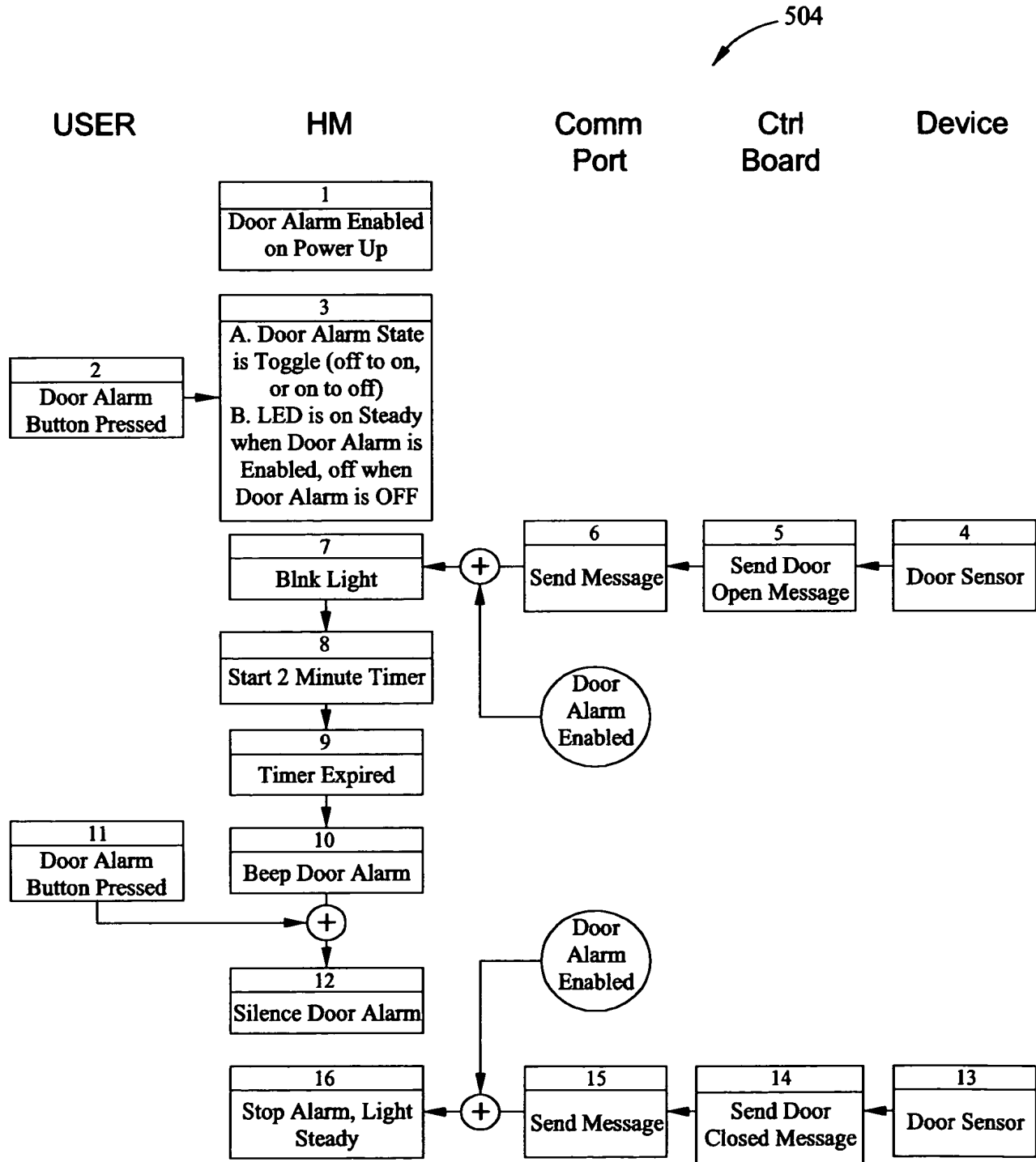


FIG. 28



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Door Open Interaction Diagram

FIG. 30

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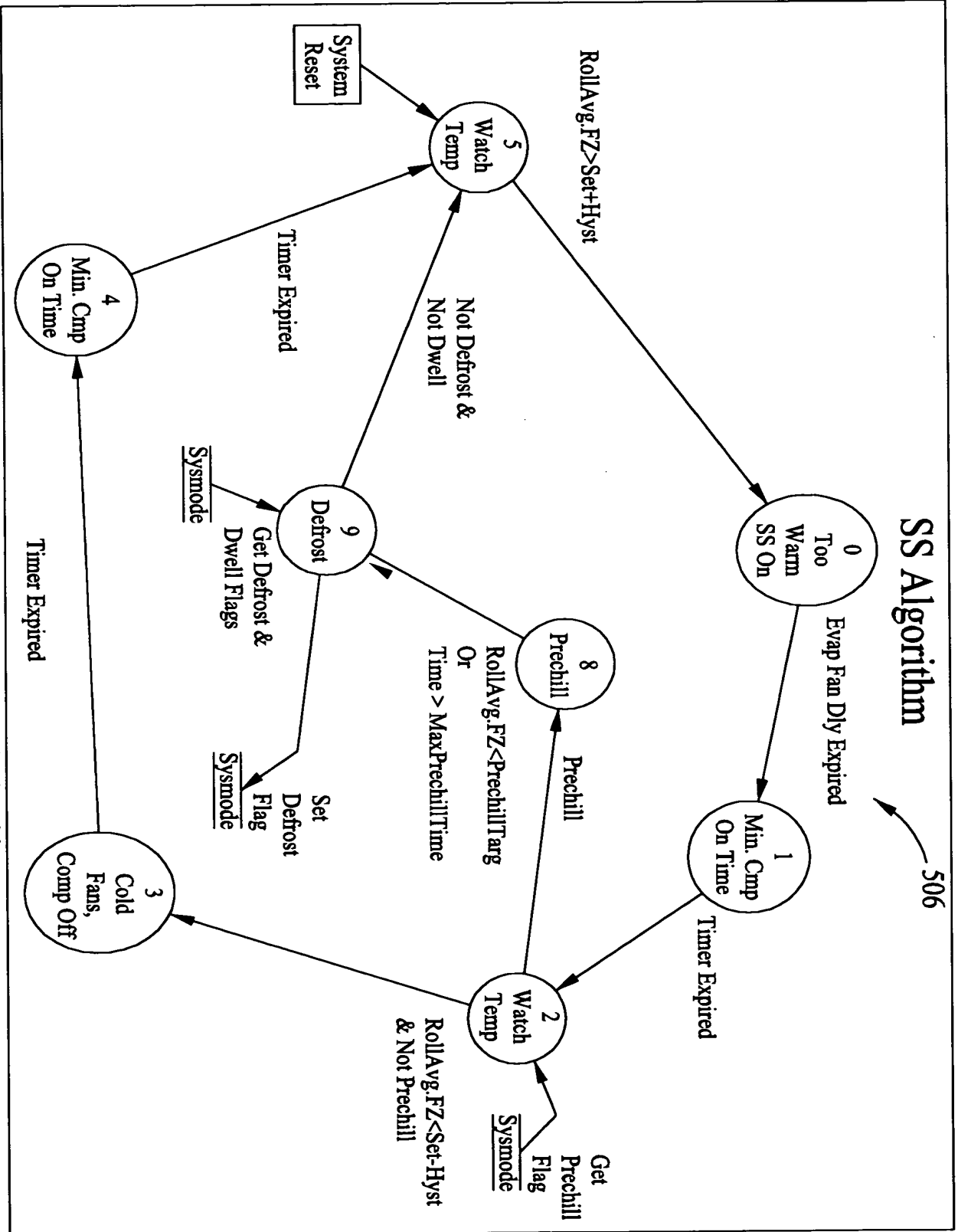
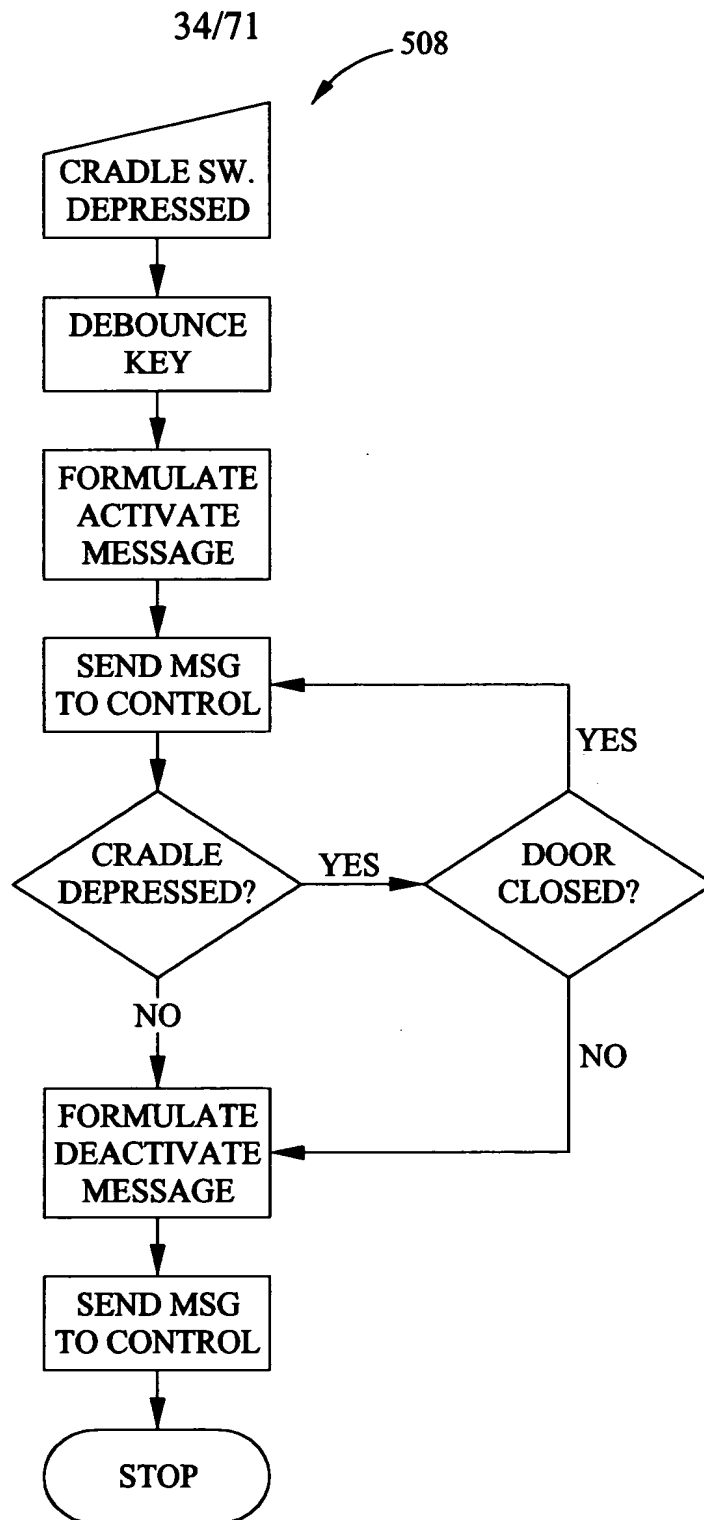


FIG. 31

Sealed System Operational Algorithm



Dispenser Control Algorithm

FIG. 32

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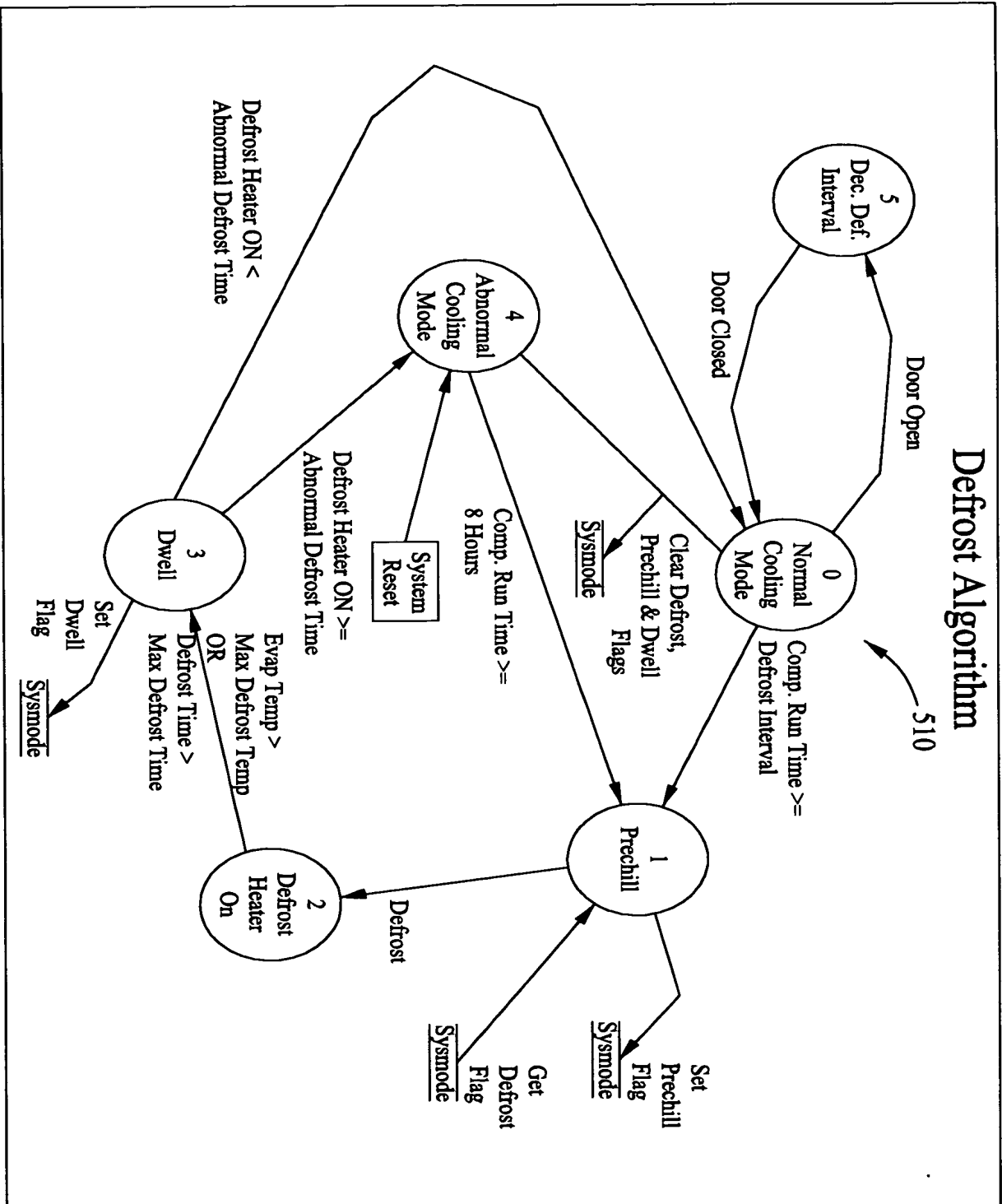


FIG. 33

Defrost Control State Diagram

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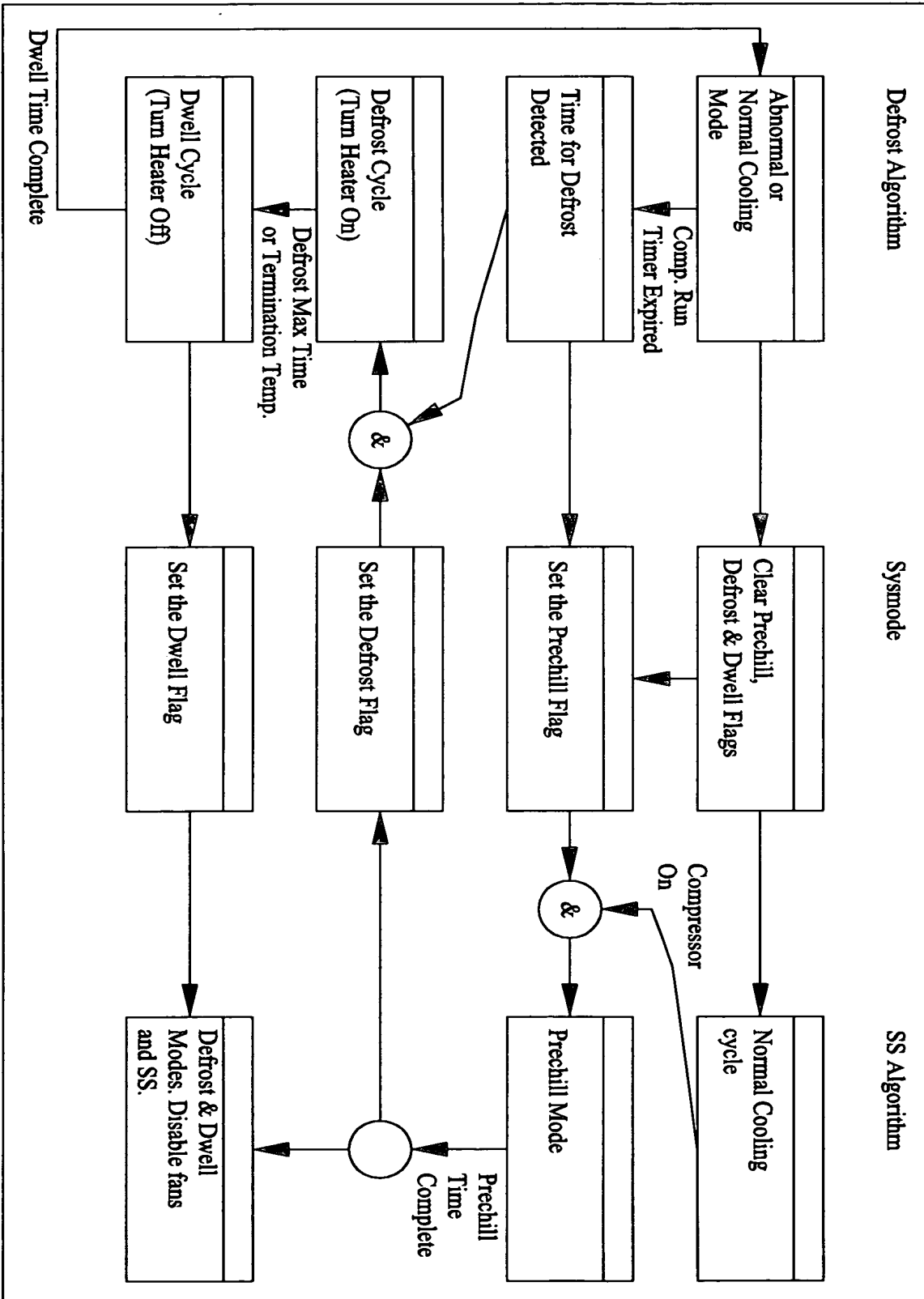
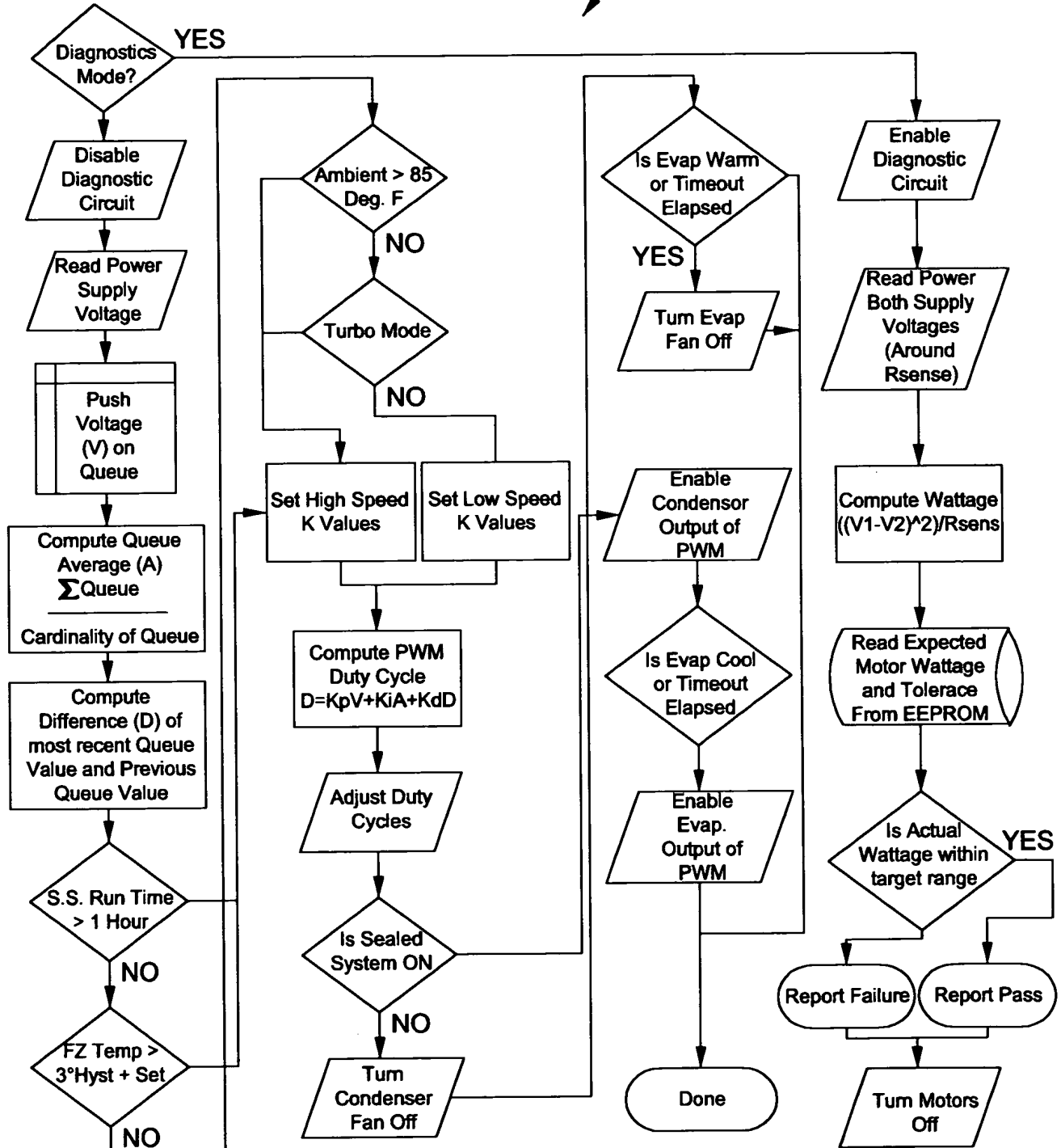


FIG. 34

Evap. & Cond. Fan Control:

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Fan Speed Control

- Notes:
1. The FF & Evaporator fans will shut off for the first five minutes that the door is open
 2. Only one fan at a time can be on at a time during diagnostics.
 3. Once the fan has been switched to high speed, it remains in that state until the operational cycle is complete.

FIG. 35

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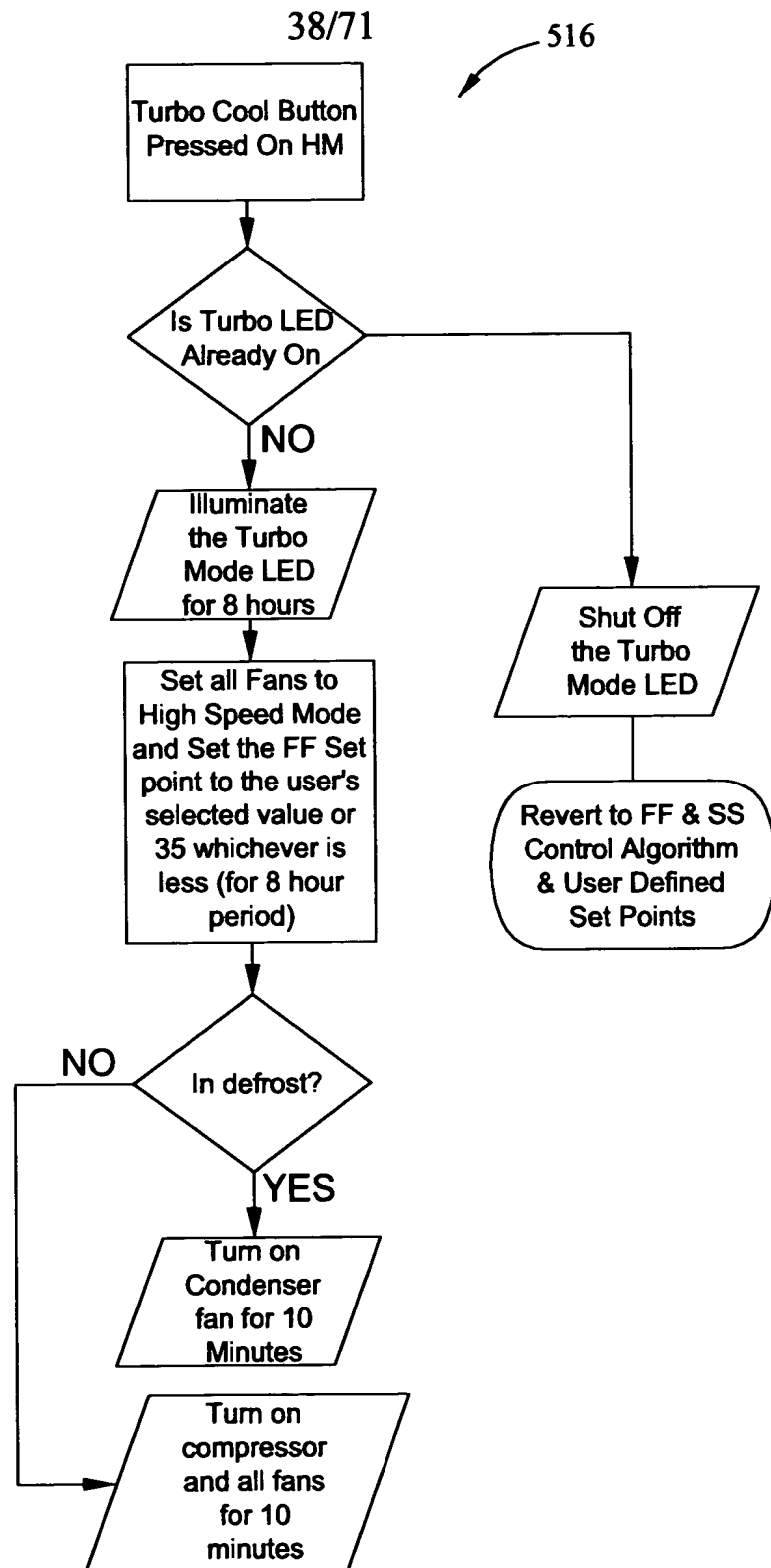


FIG. 36

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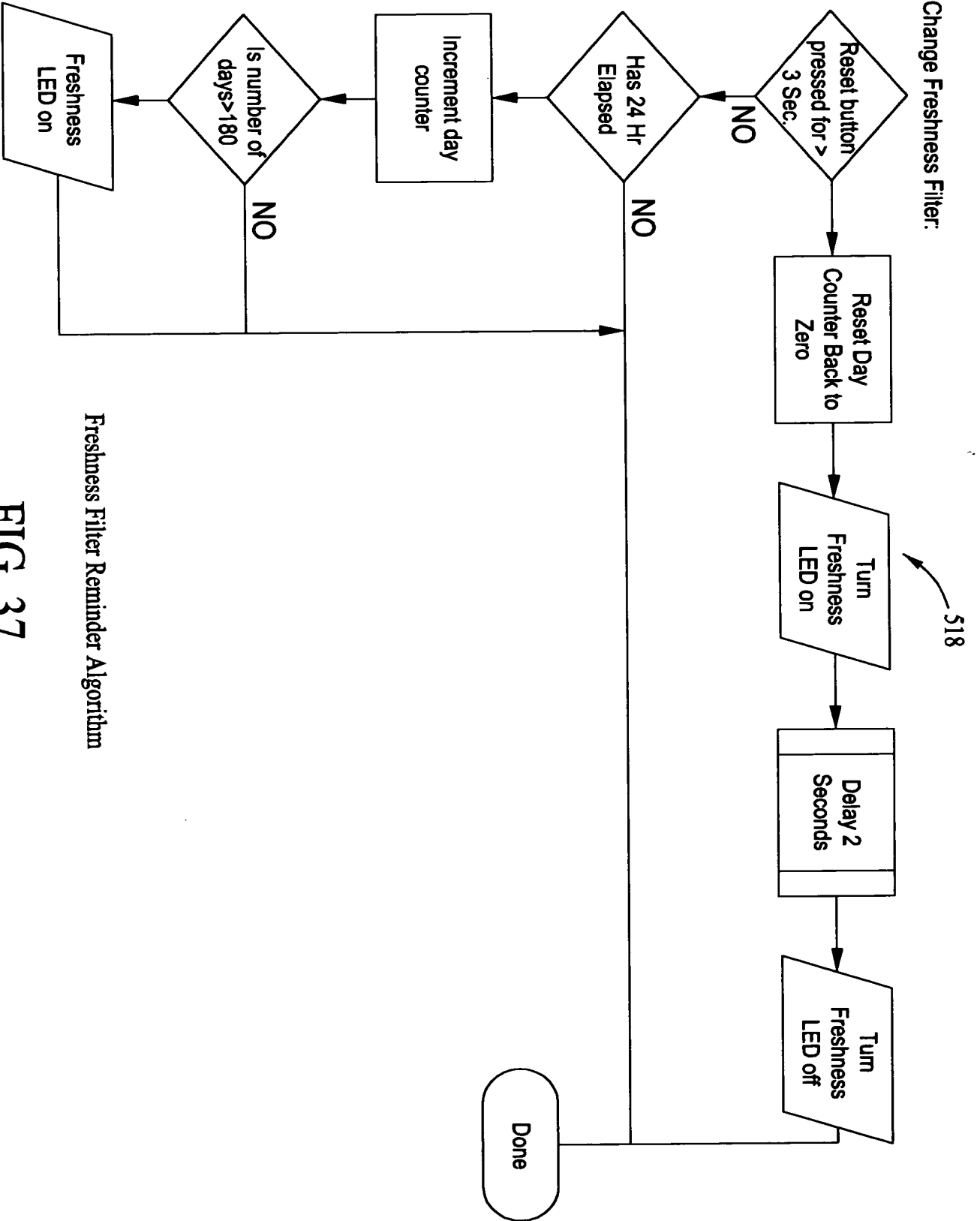
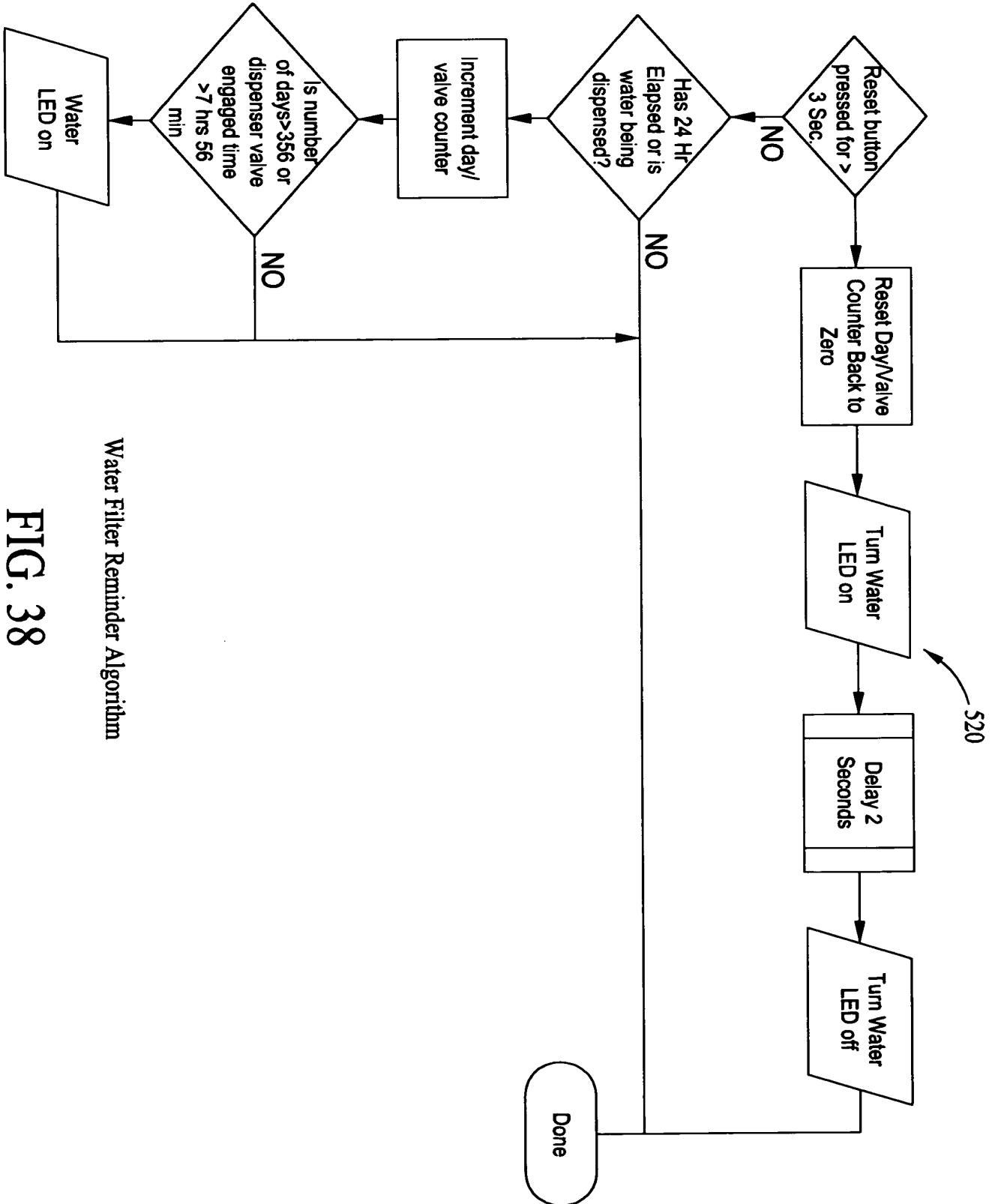
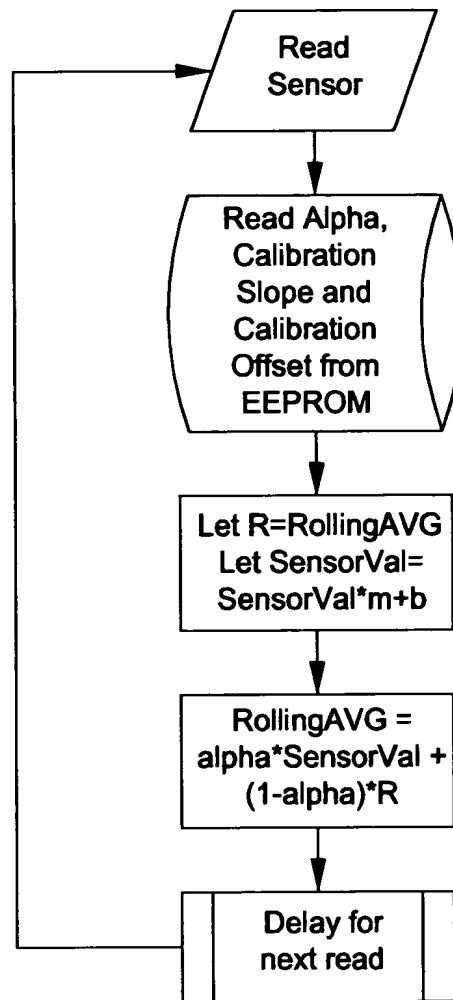


FIG. 37

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 SENSOR READ AND ROLLING AVERAGE ALGO: 522



NOTE:
 Sensor Reading Algorithm
 Fresh food average uses this algorithm twice to create a 2nd pole filter.

FIG. 39

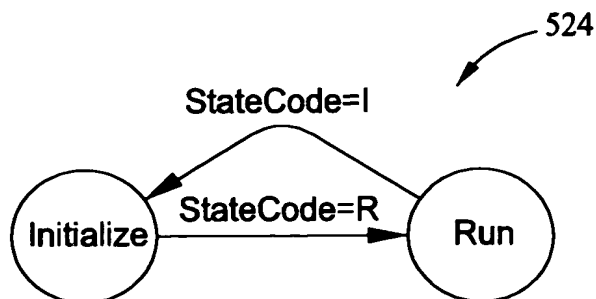
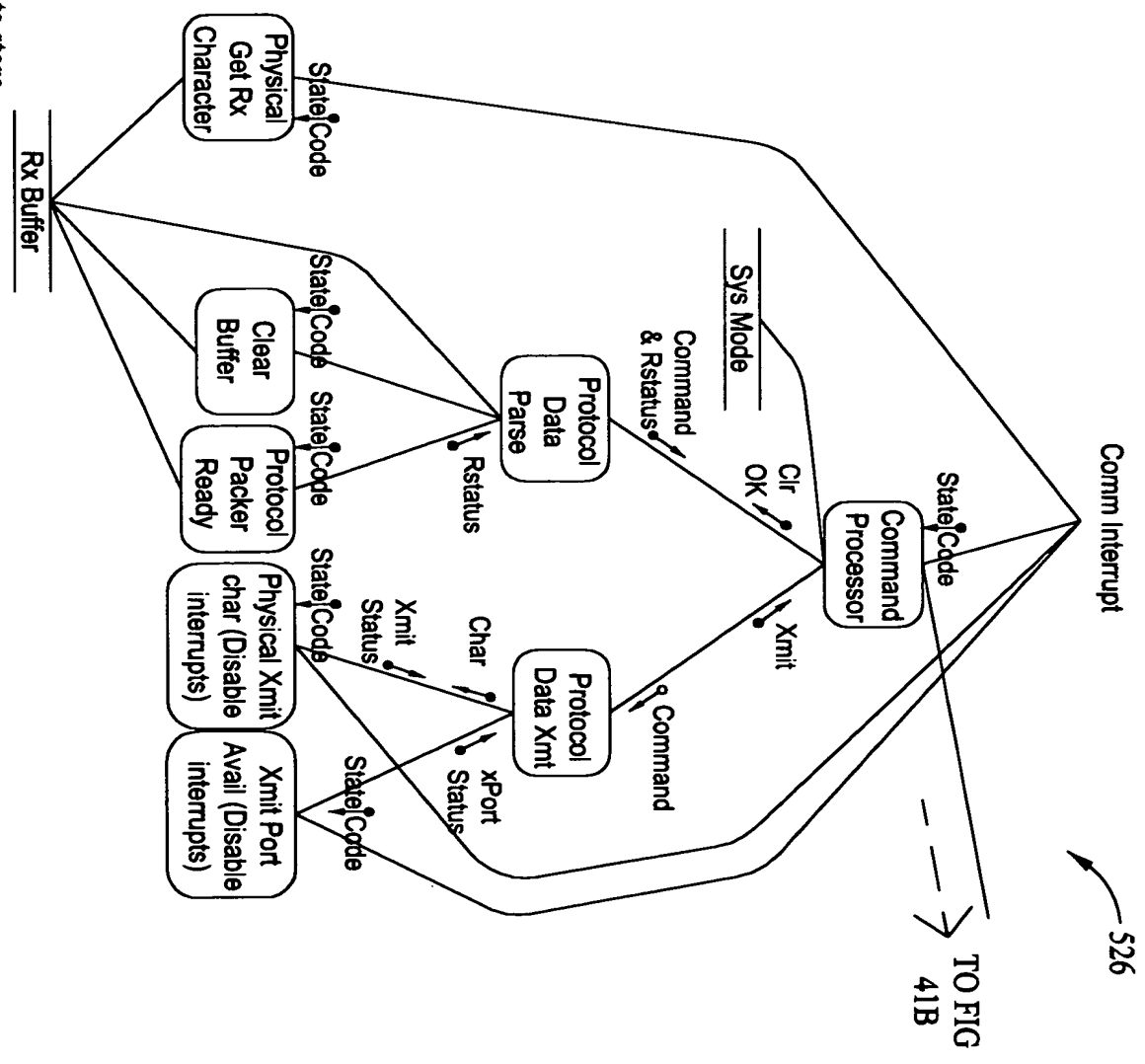


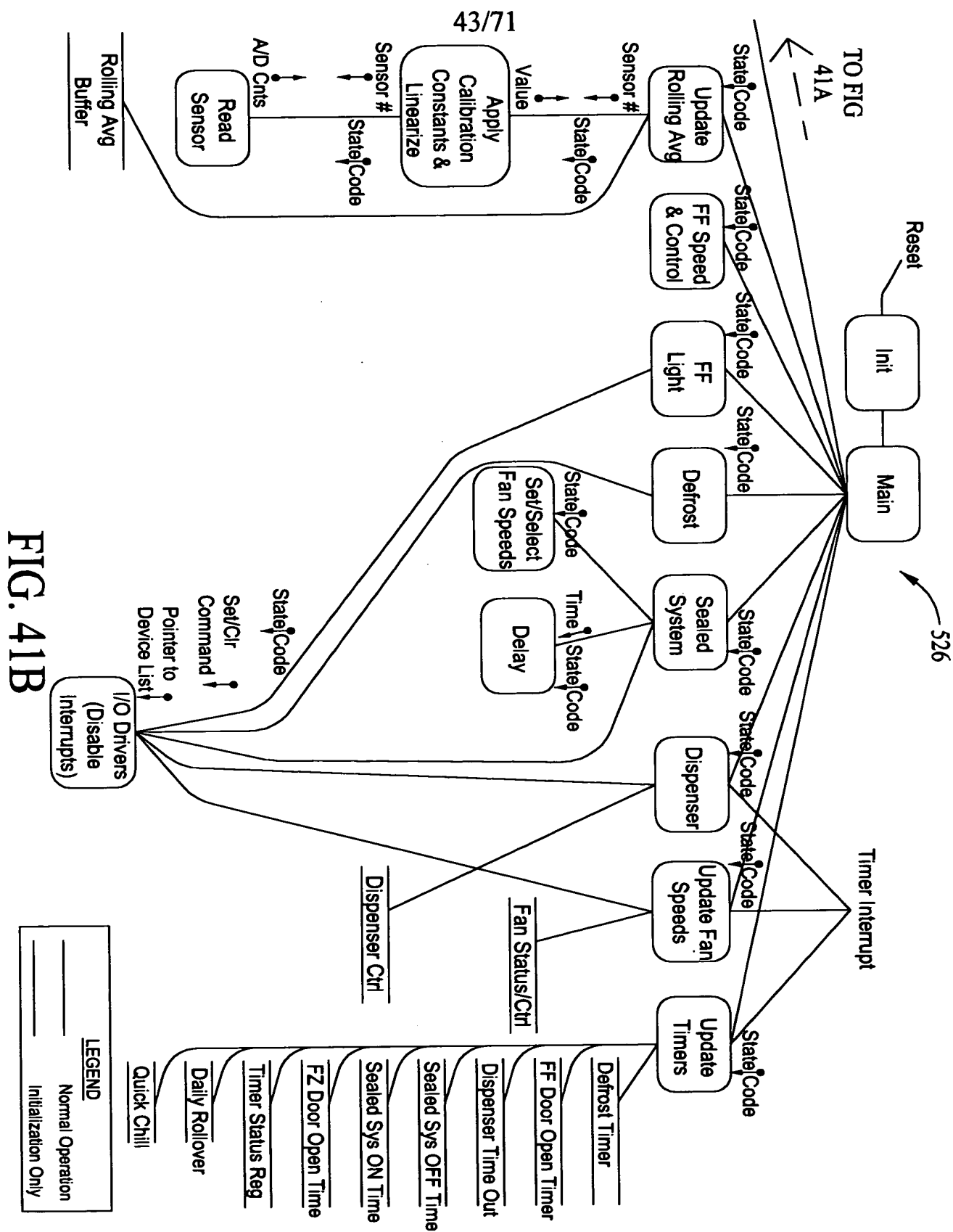
FIG. 40

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Note: Any Routine is allowed to read a data store
 The command processor can read or write
 any data store.
 Dashed line indicates a path for initialization only

FIG. 41A





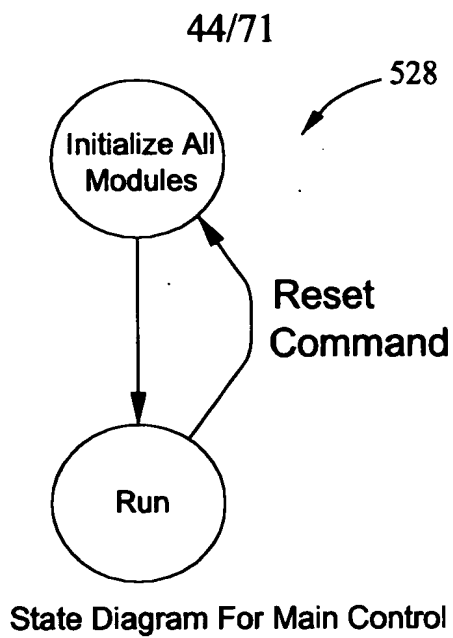


FIG. 42

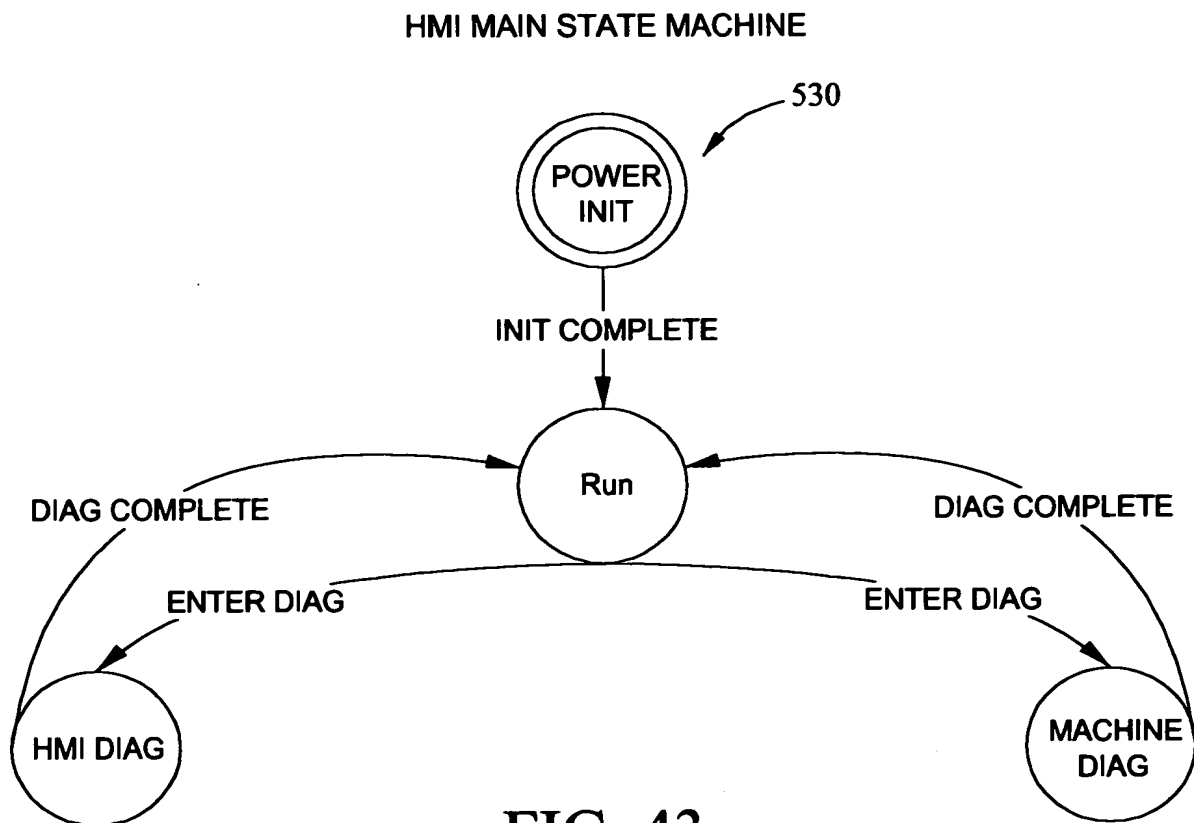


FIG. 43

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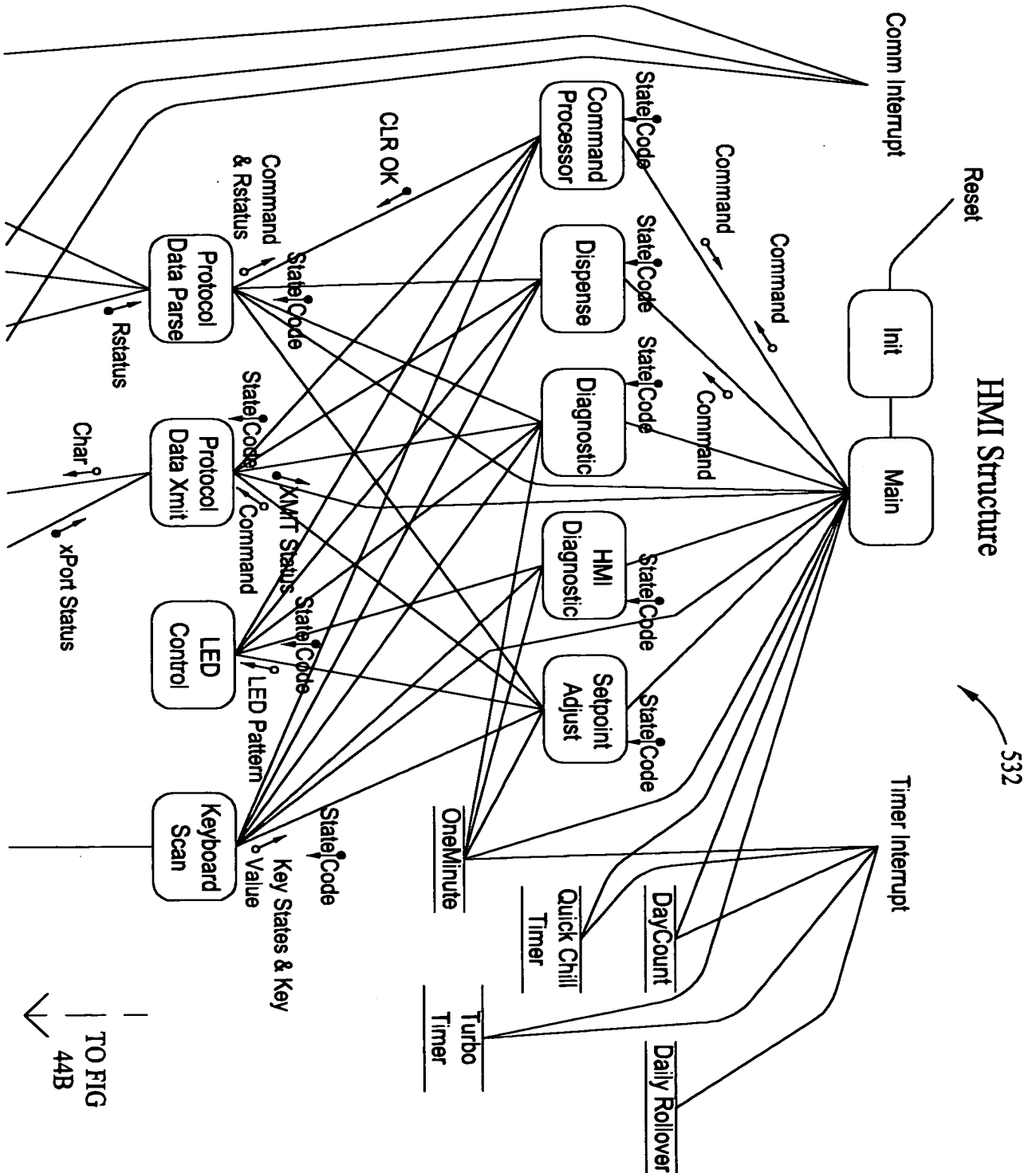


FIG. 44A

TO FIG
44B

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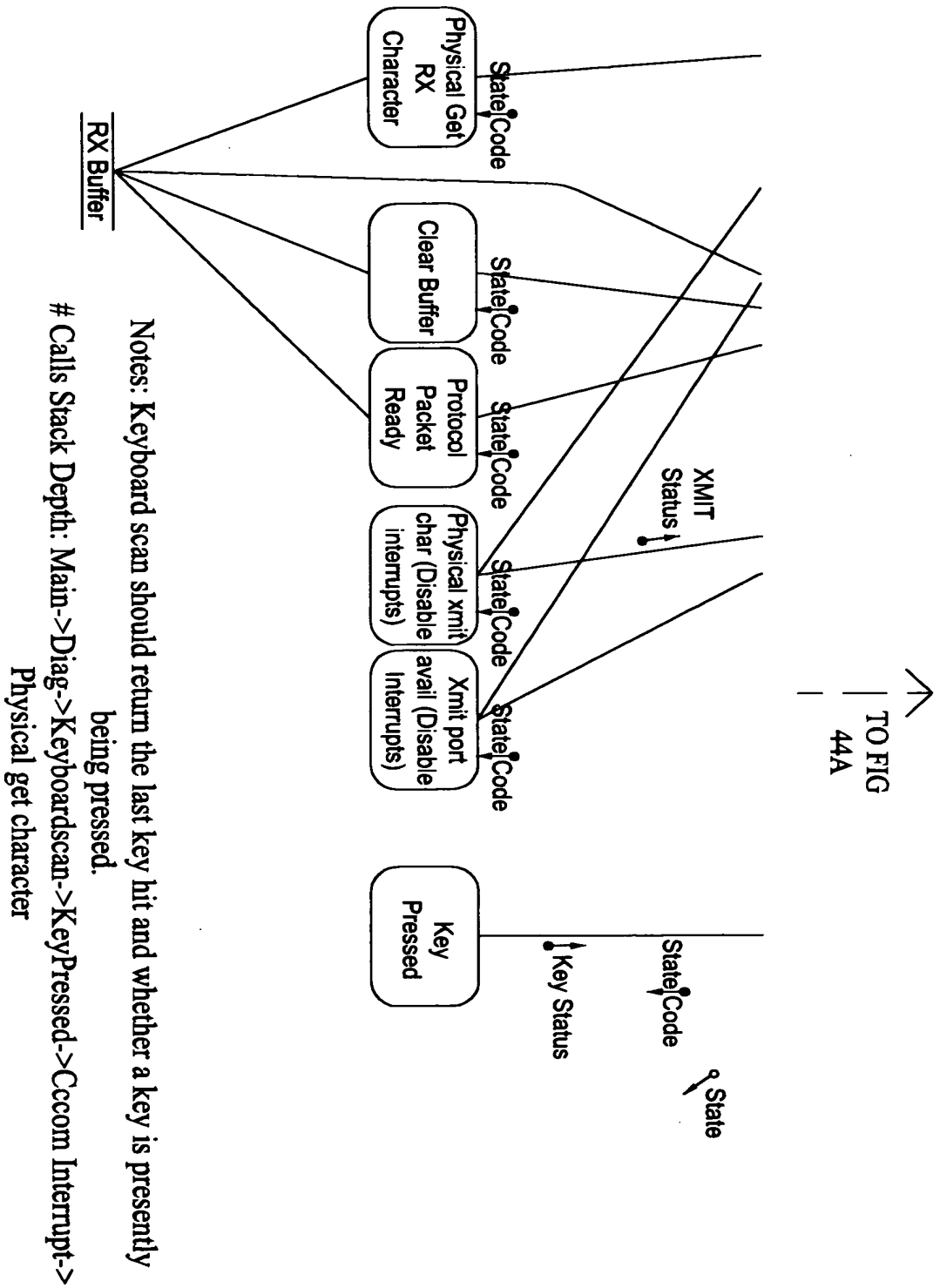
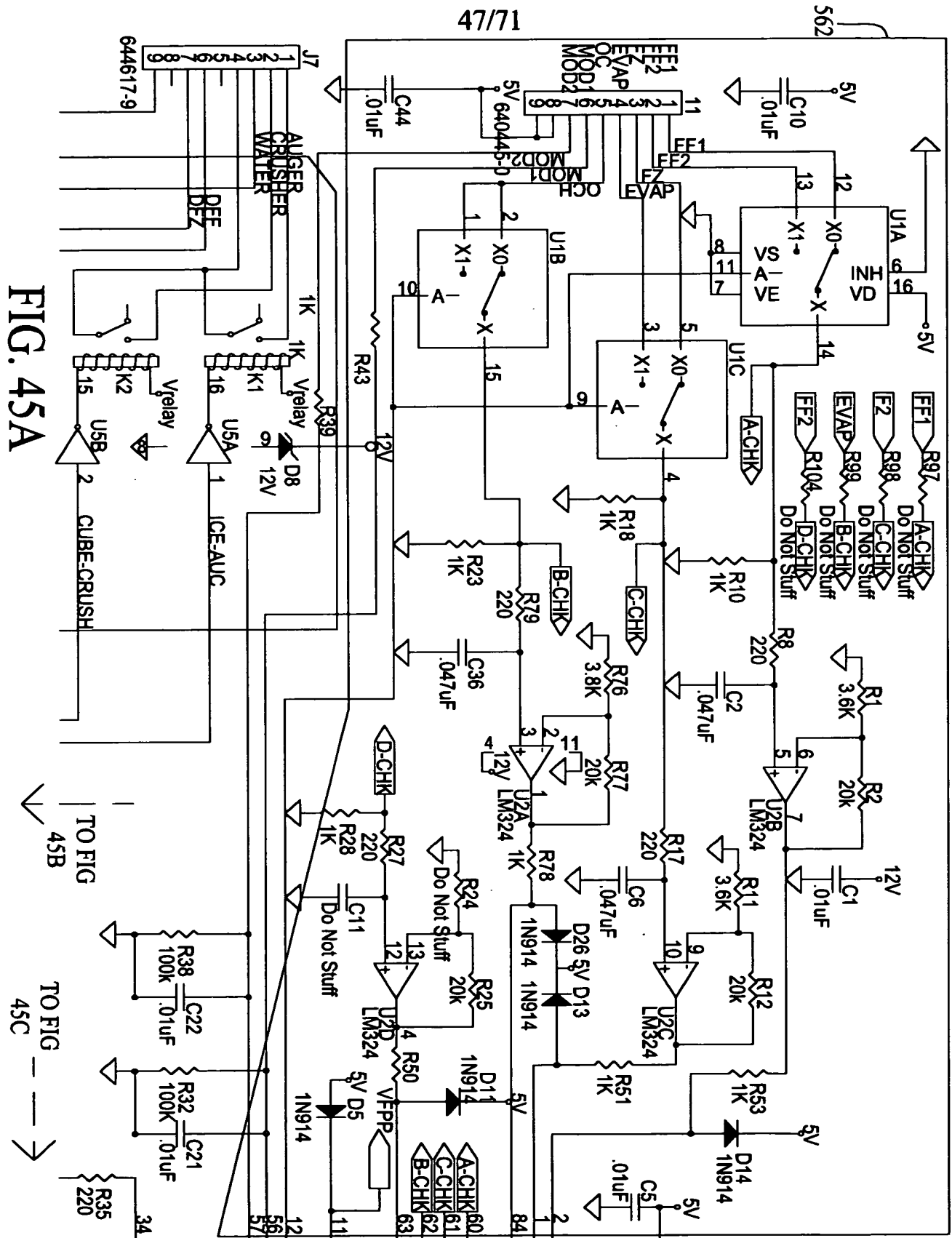


FIG. 44B

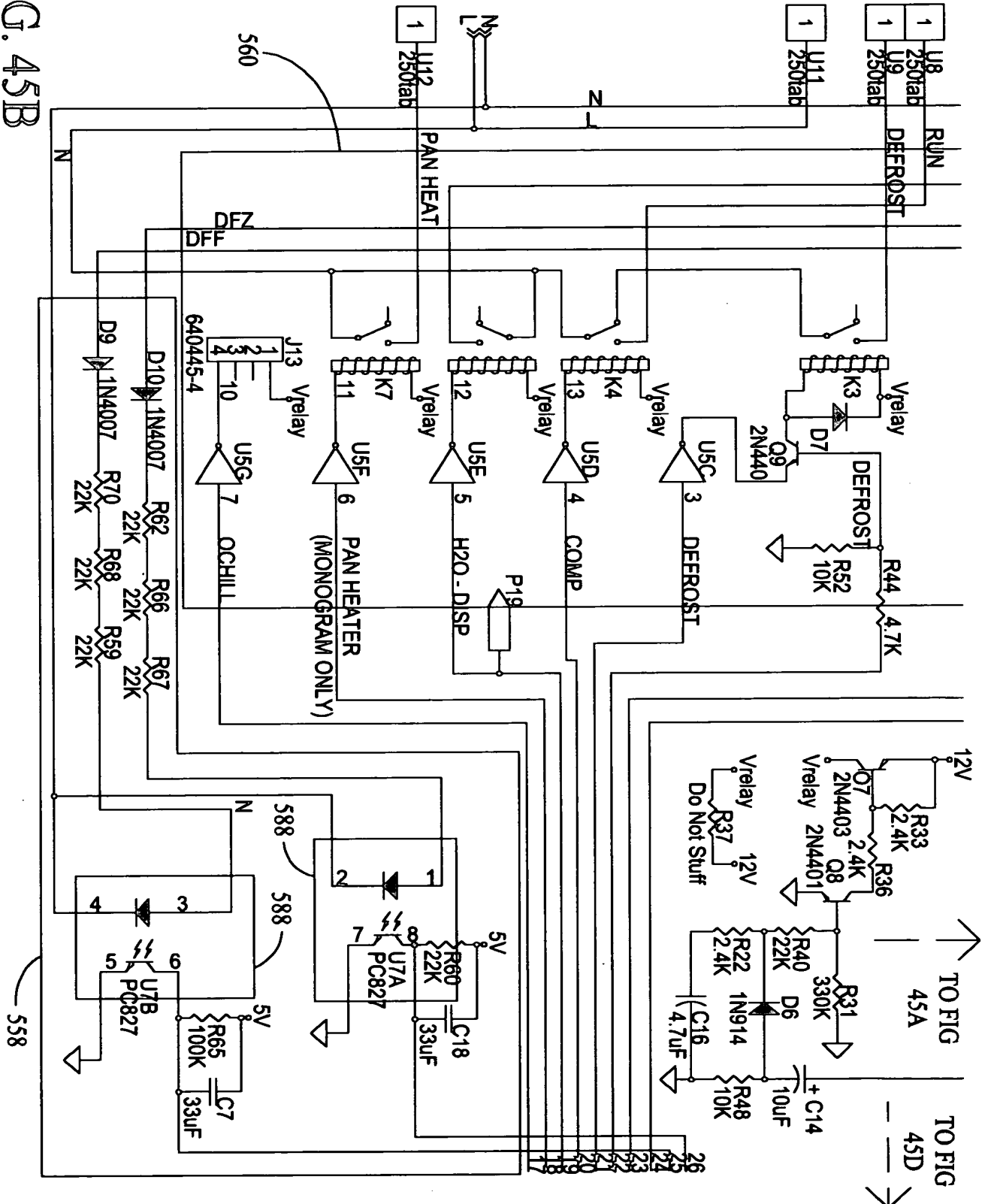
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ARCHITECTUREJohn S. Beulick, Armstrong Teasdale LLP, One Metropolitan Square,
Suite 2600, St. Louis, MO 63102 (314) 621-5070

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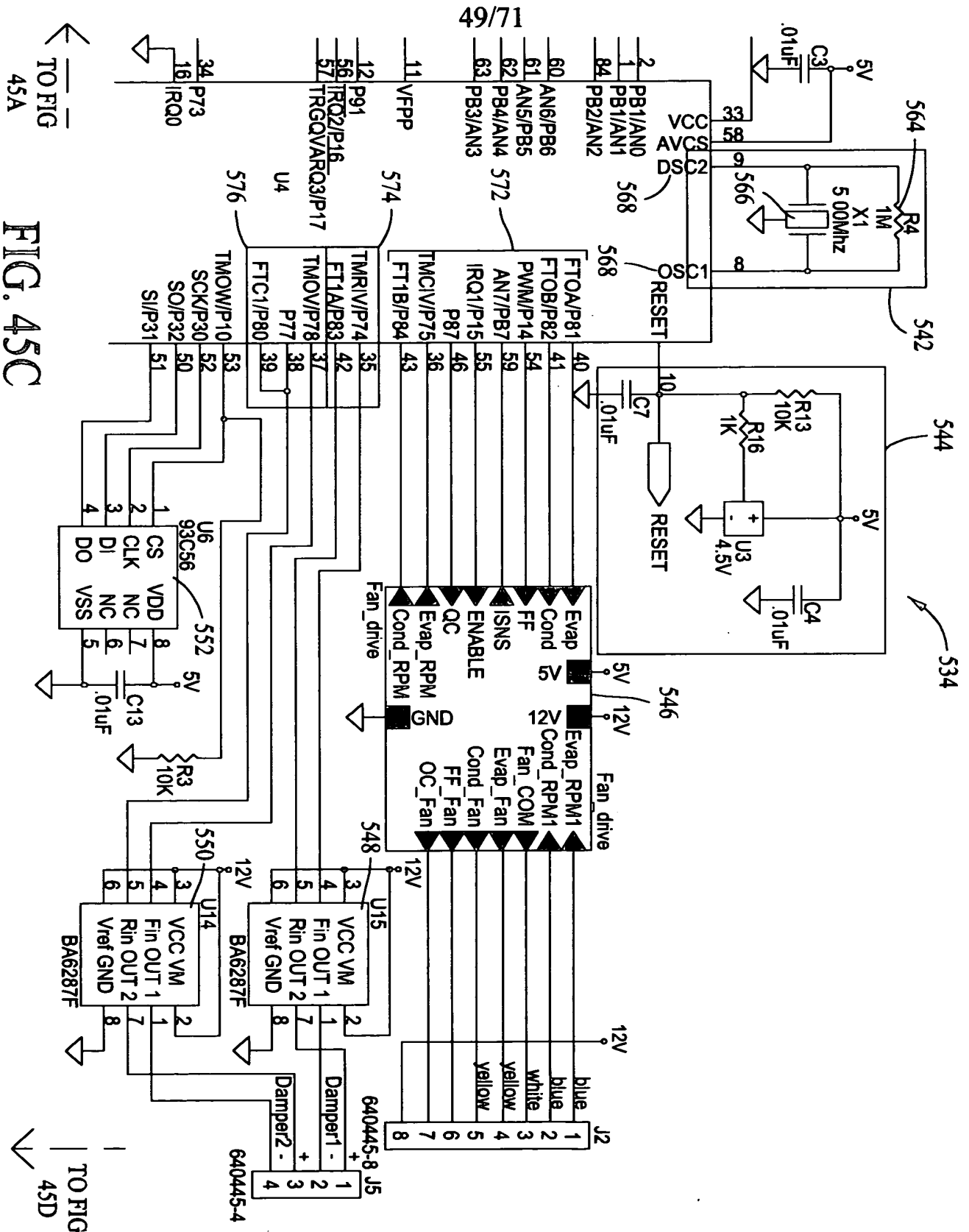
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FIG. 45B



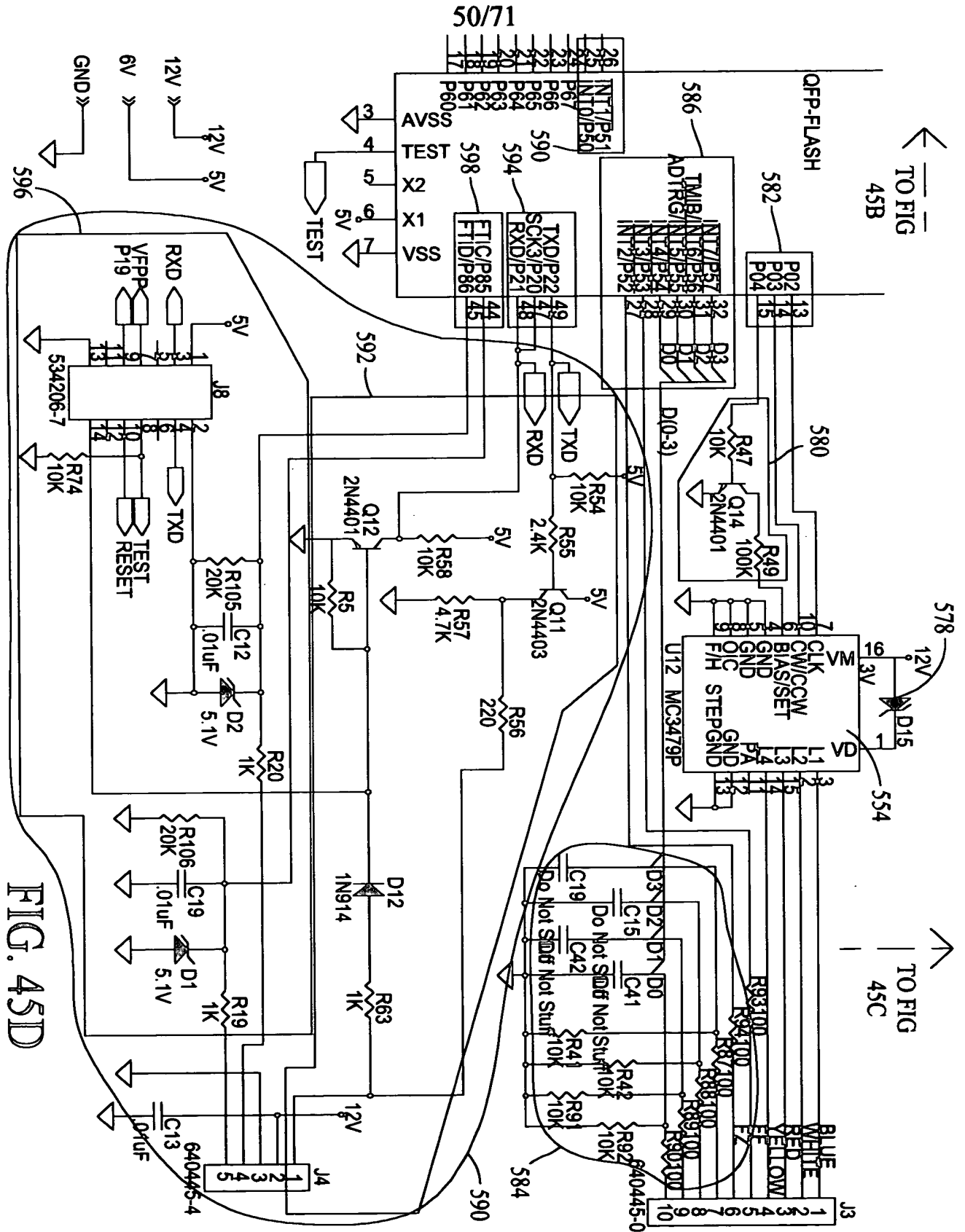
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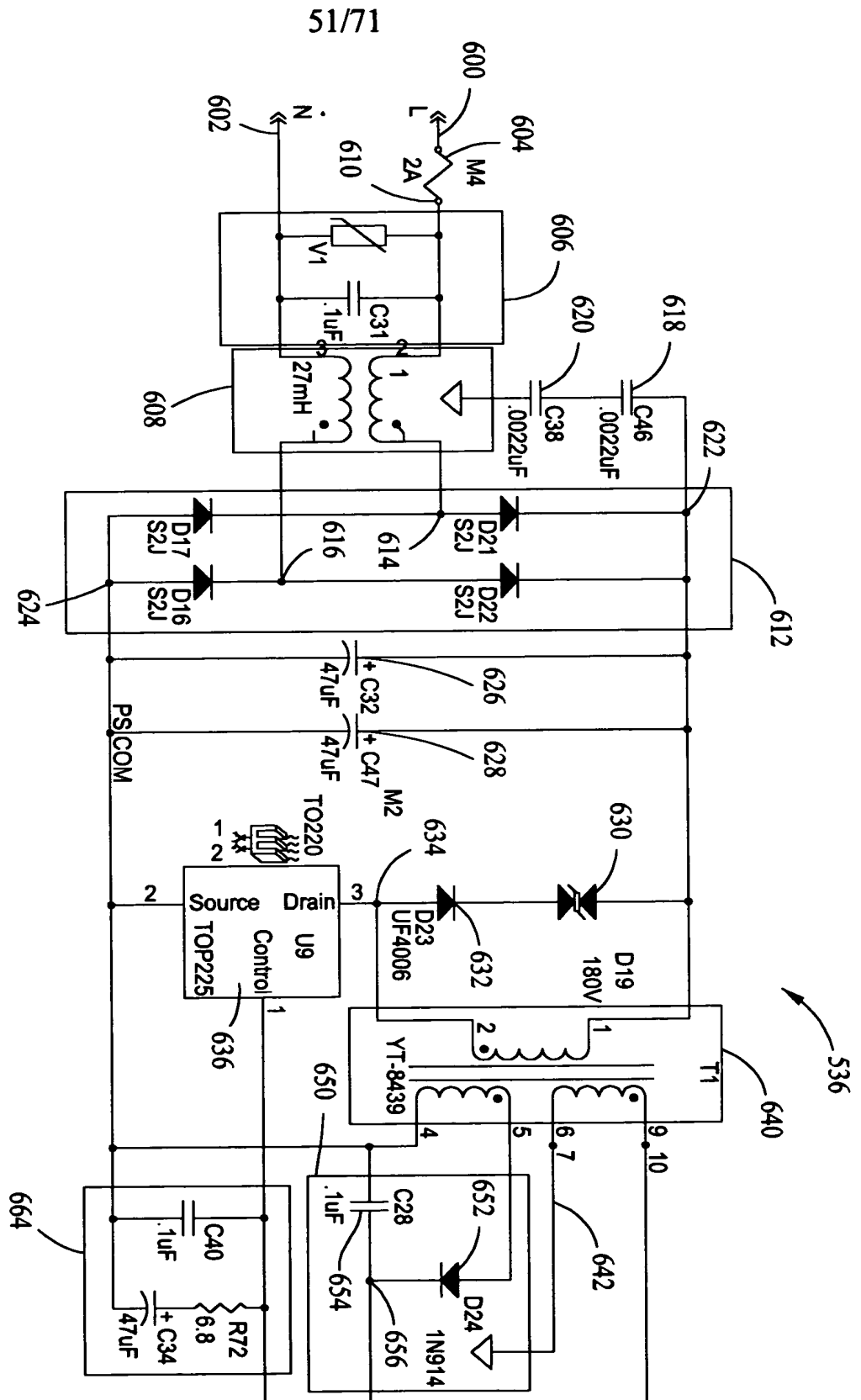


FIG. 45E

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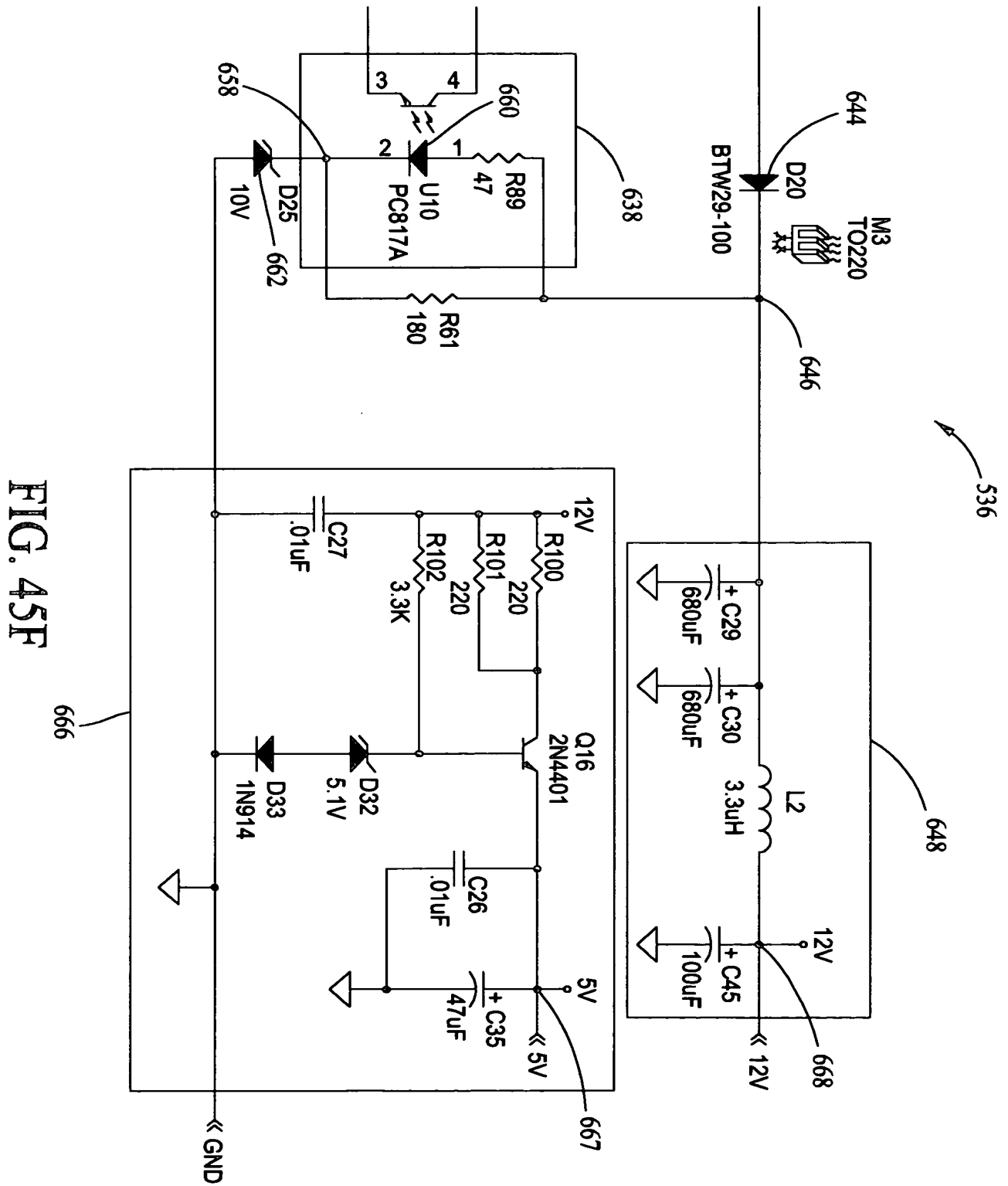


FIG. 45F

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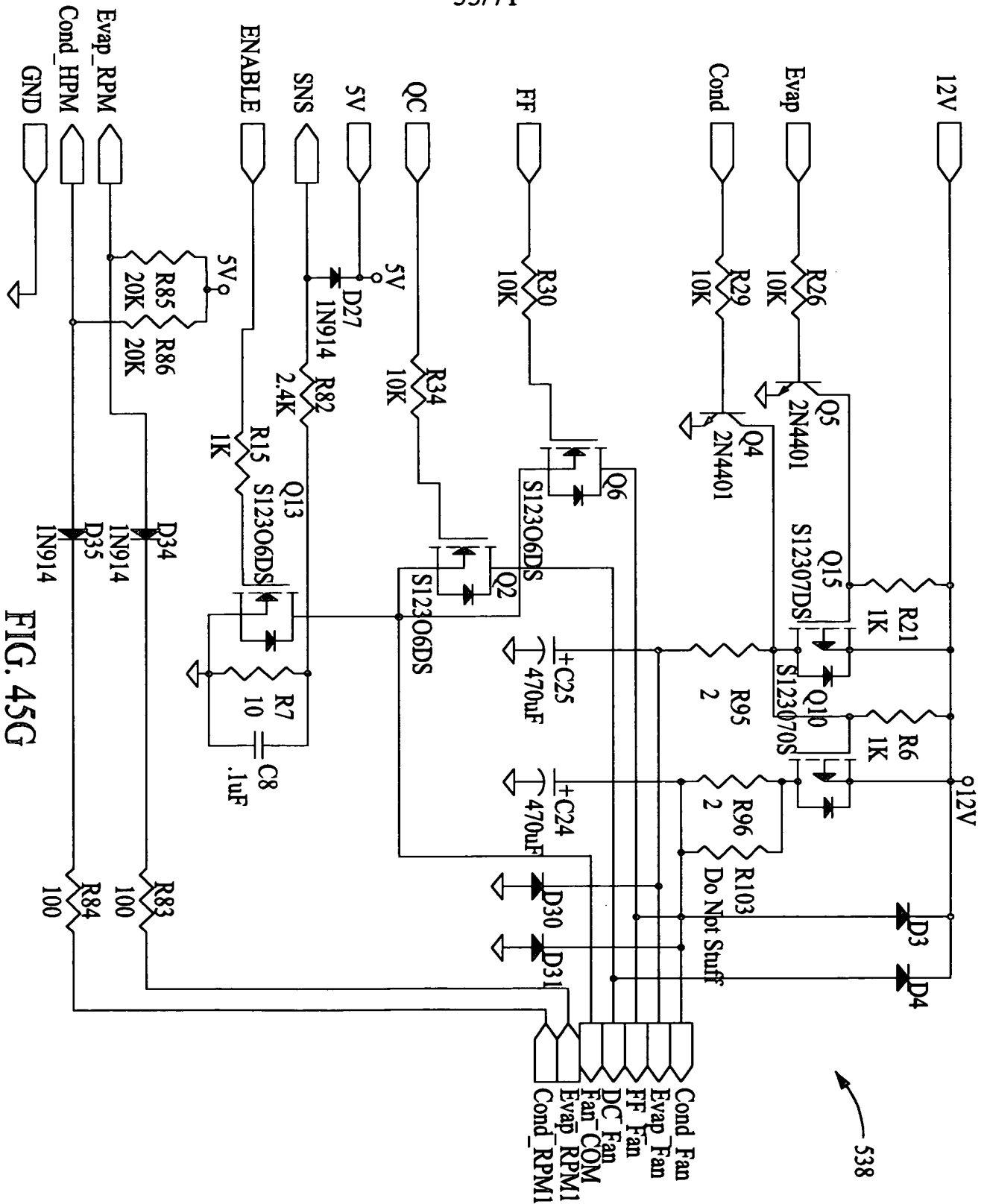


FIG. 45G

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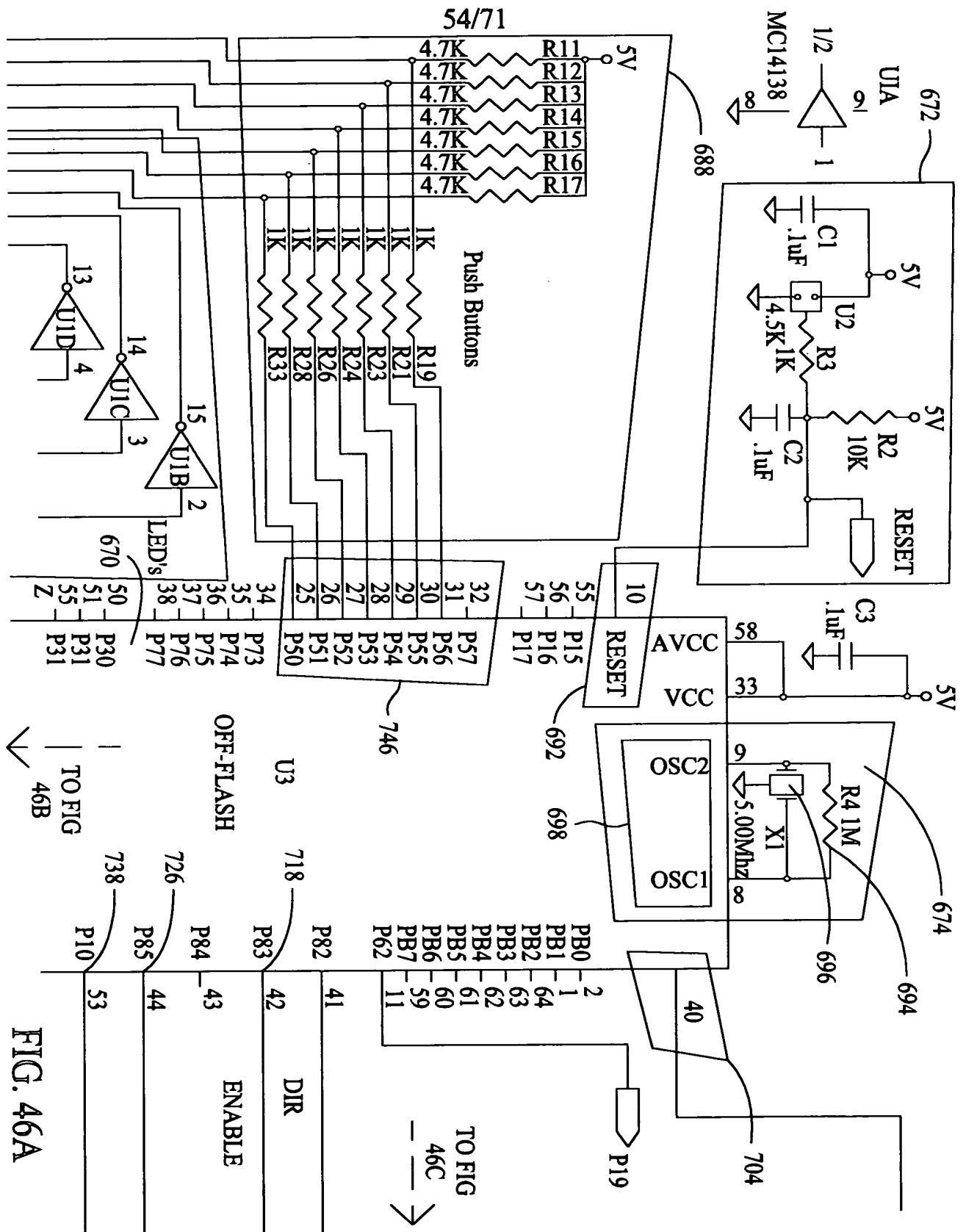
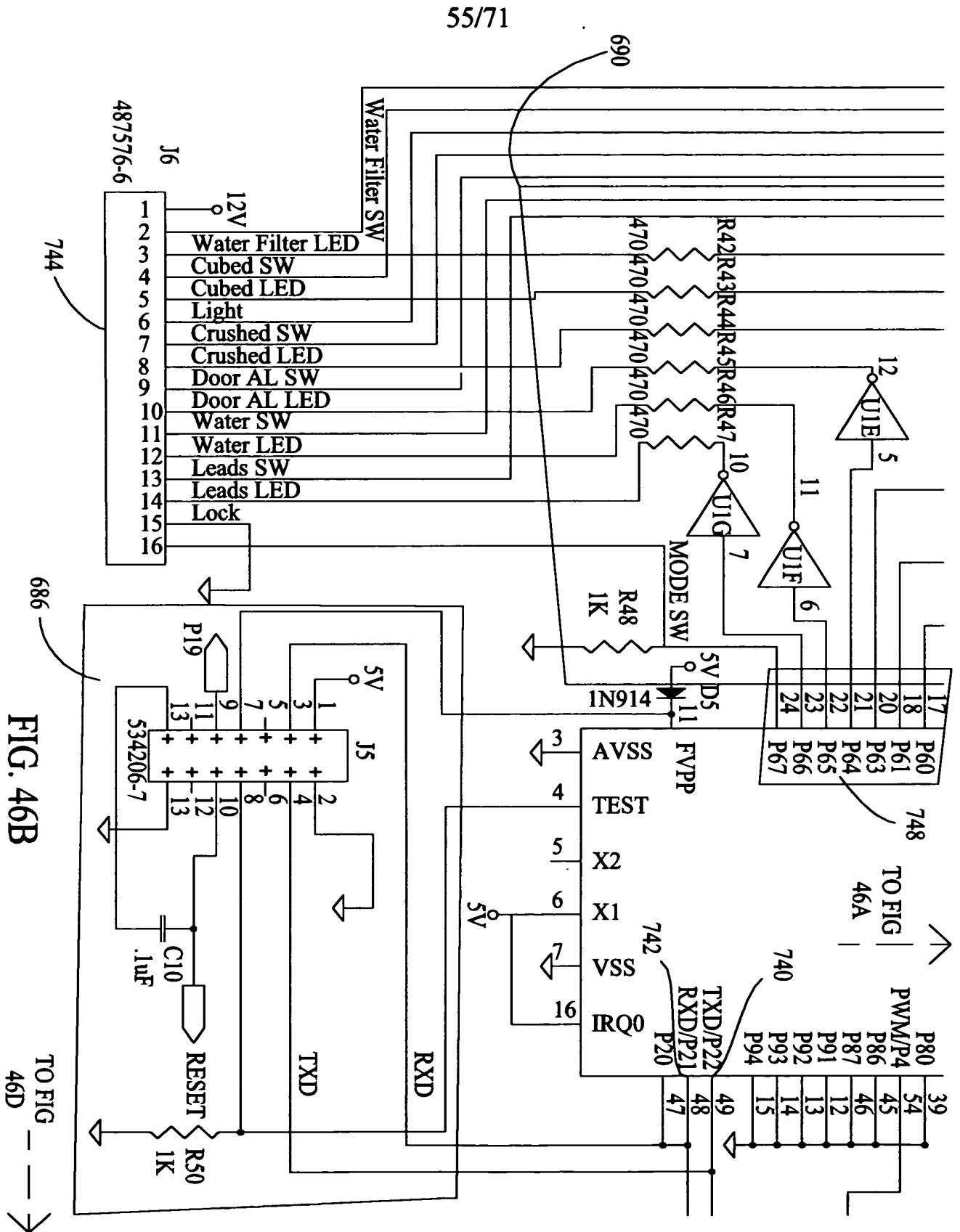


FIG. 46A

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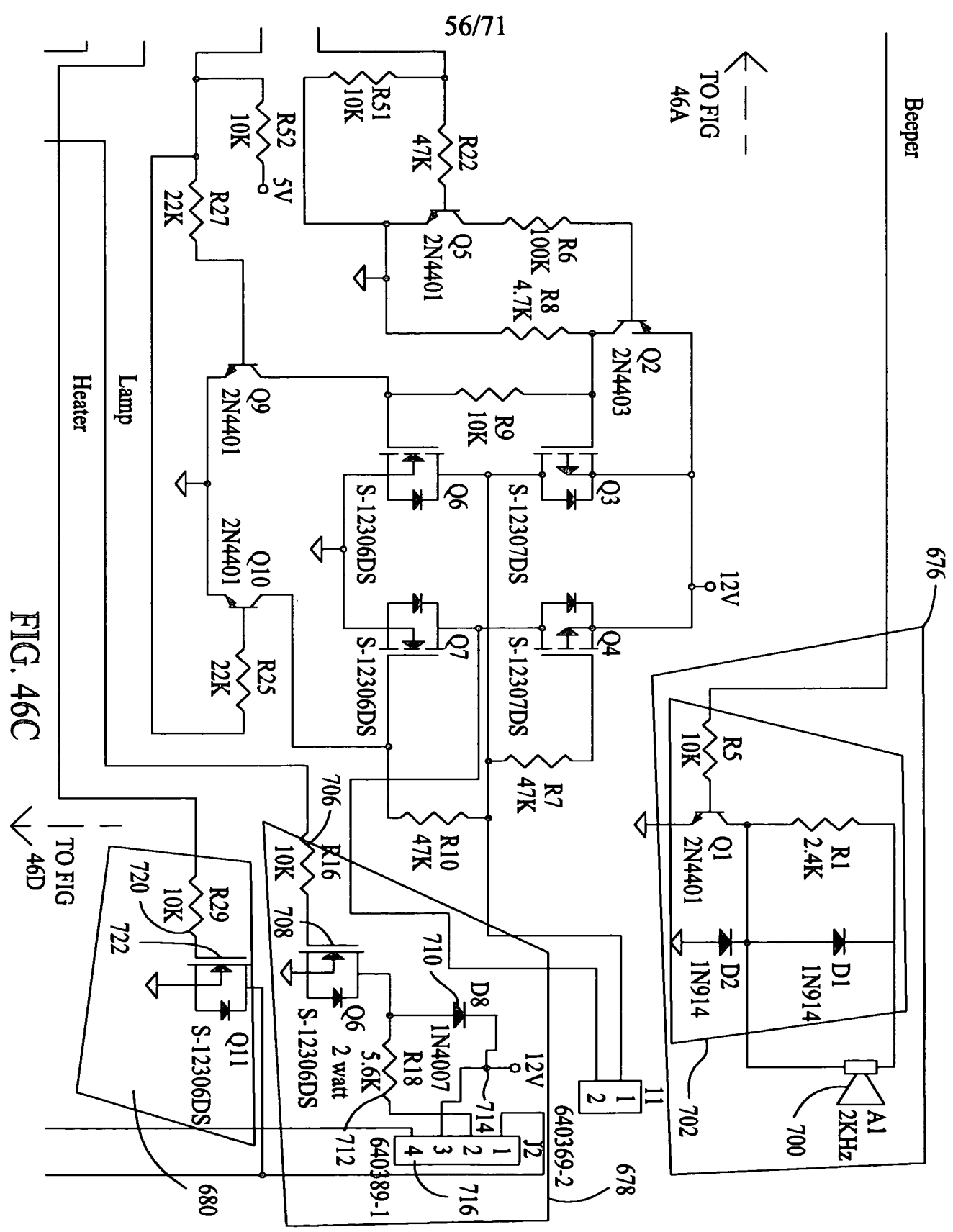
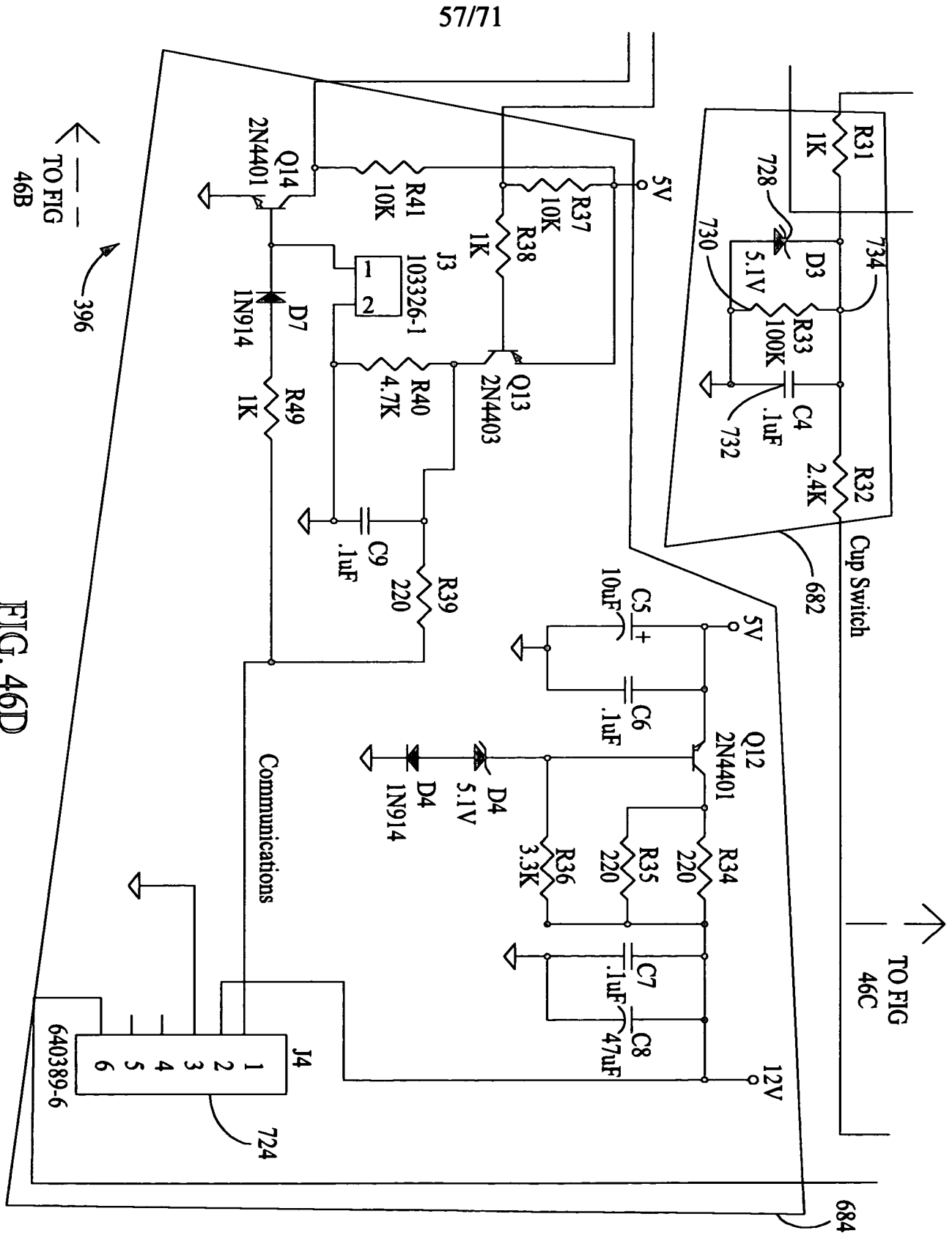


FIG. 46C

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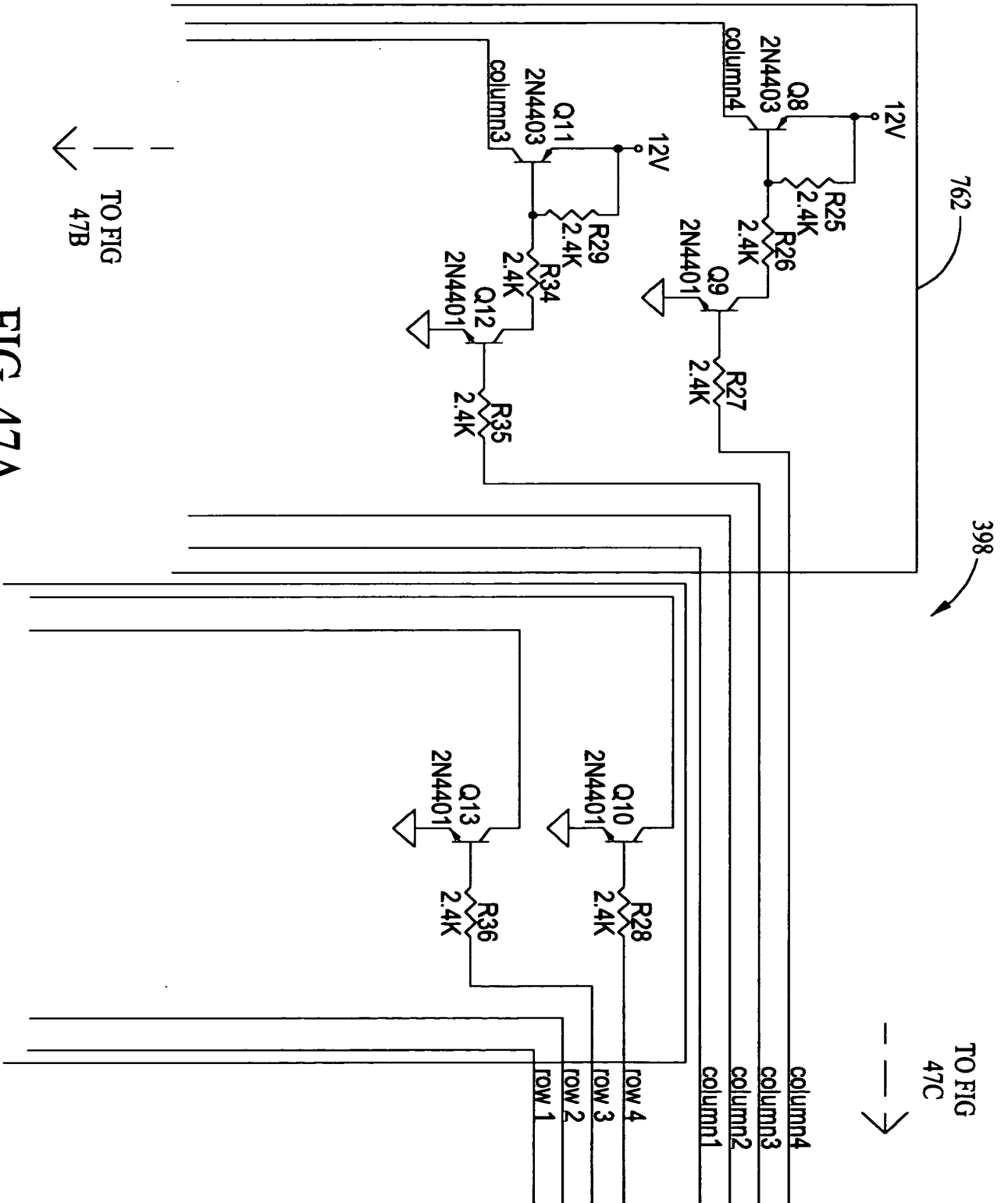


FIG. 47A

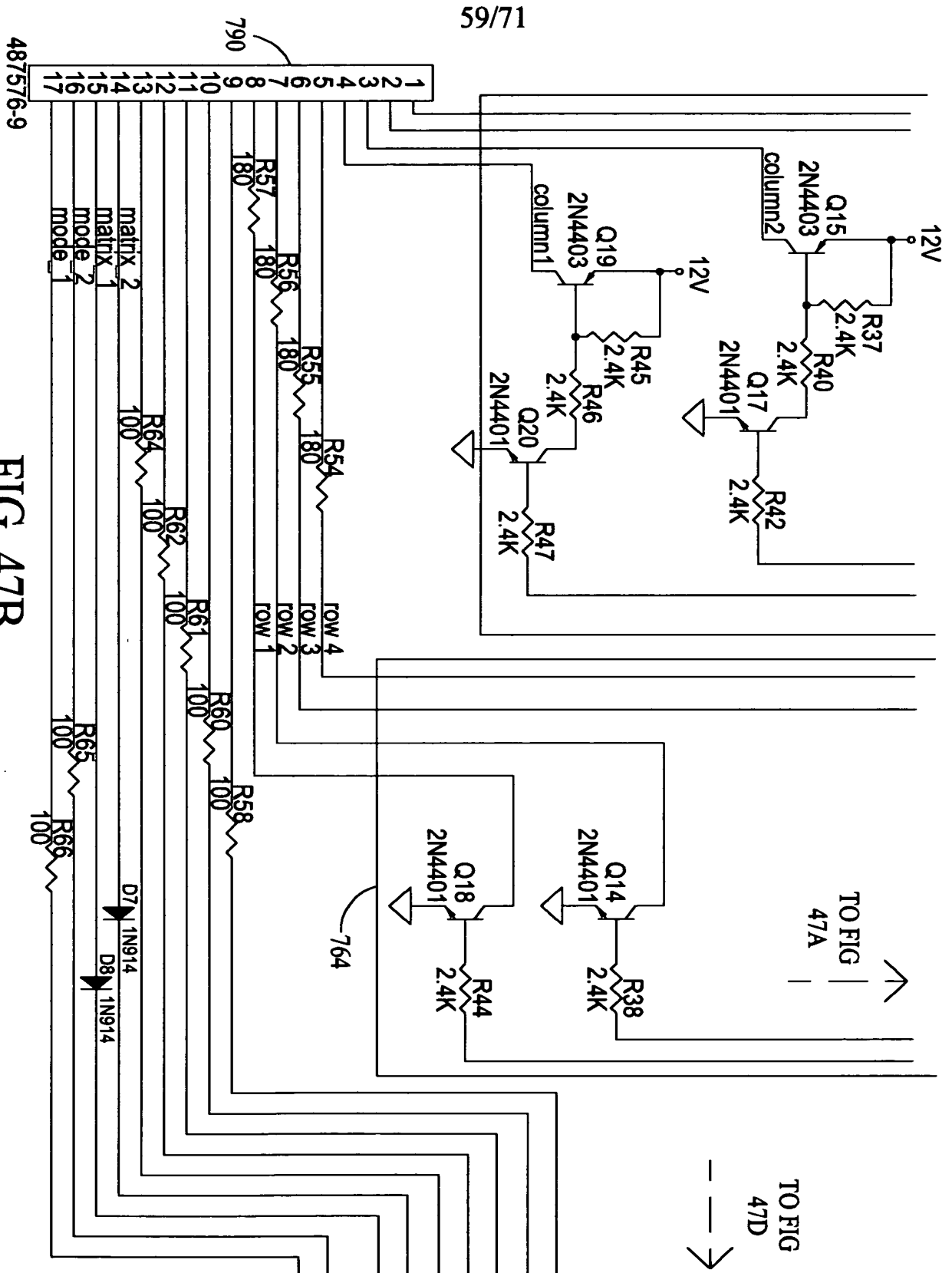


FIG. 47B

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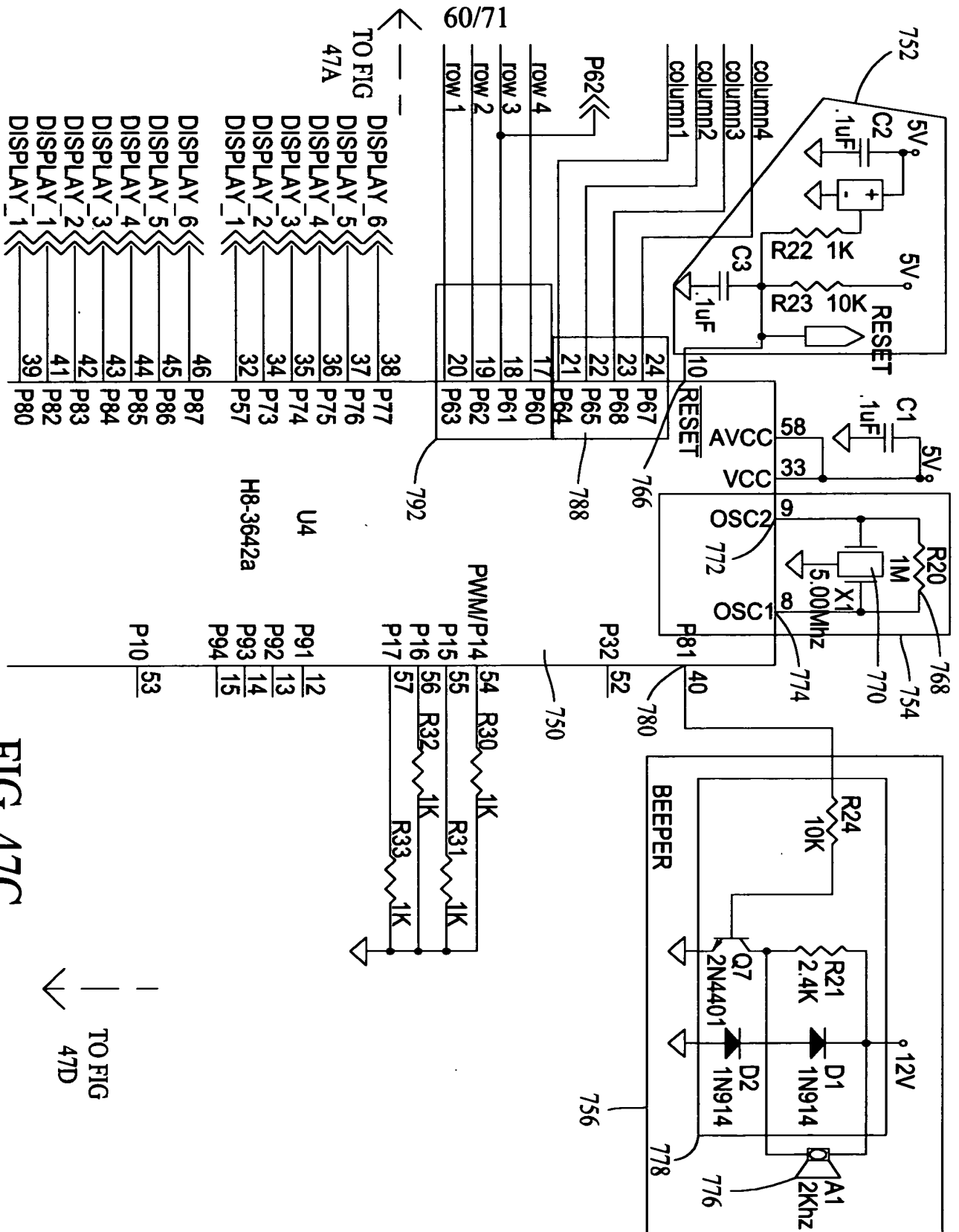


FIG. 47C

TO FIG
47D



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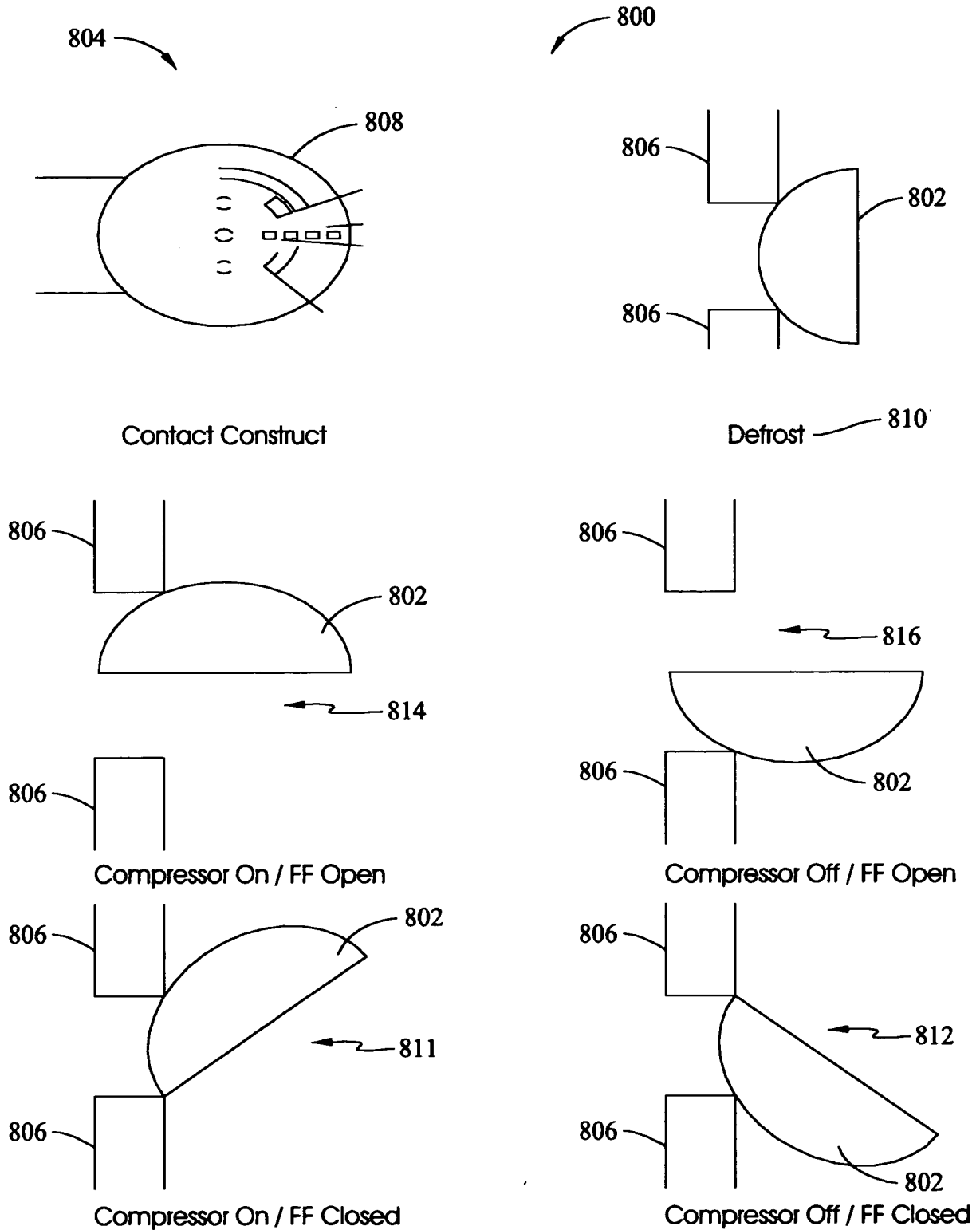
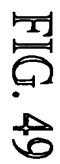


FIG. 48



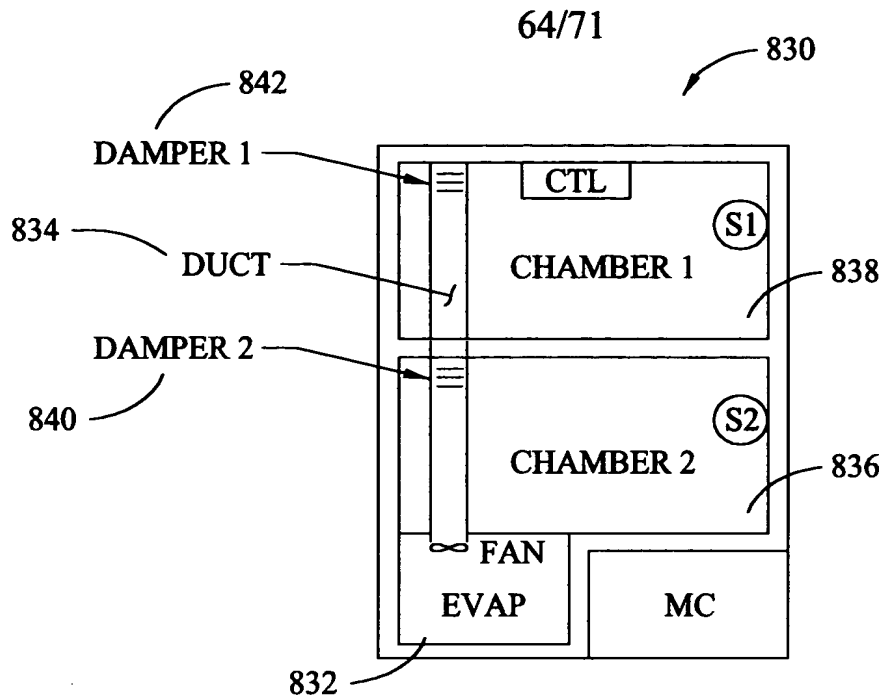


FIG. 50

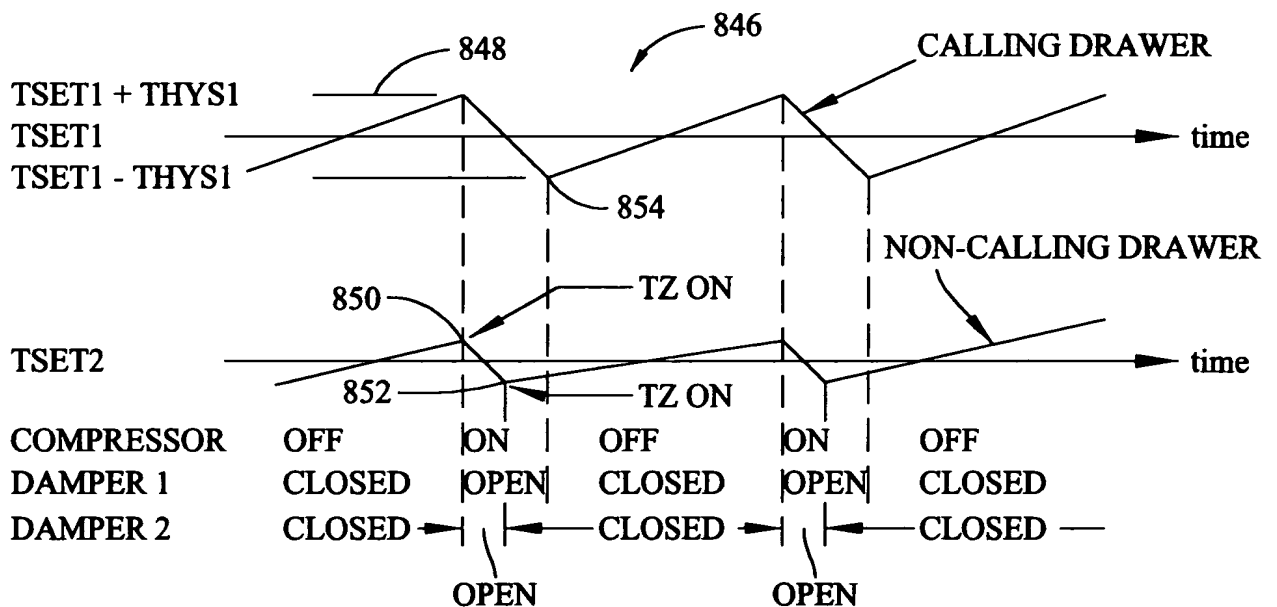


FIG. 51



FIG. 52

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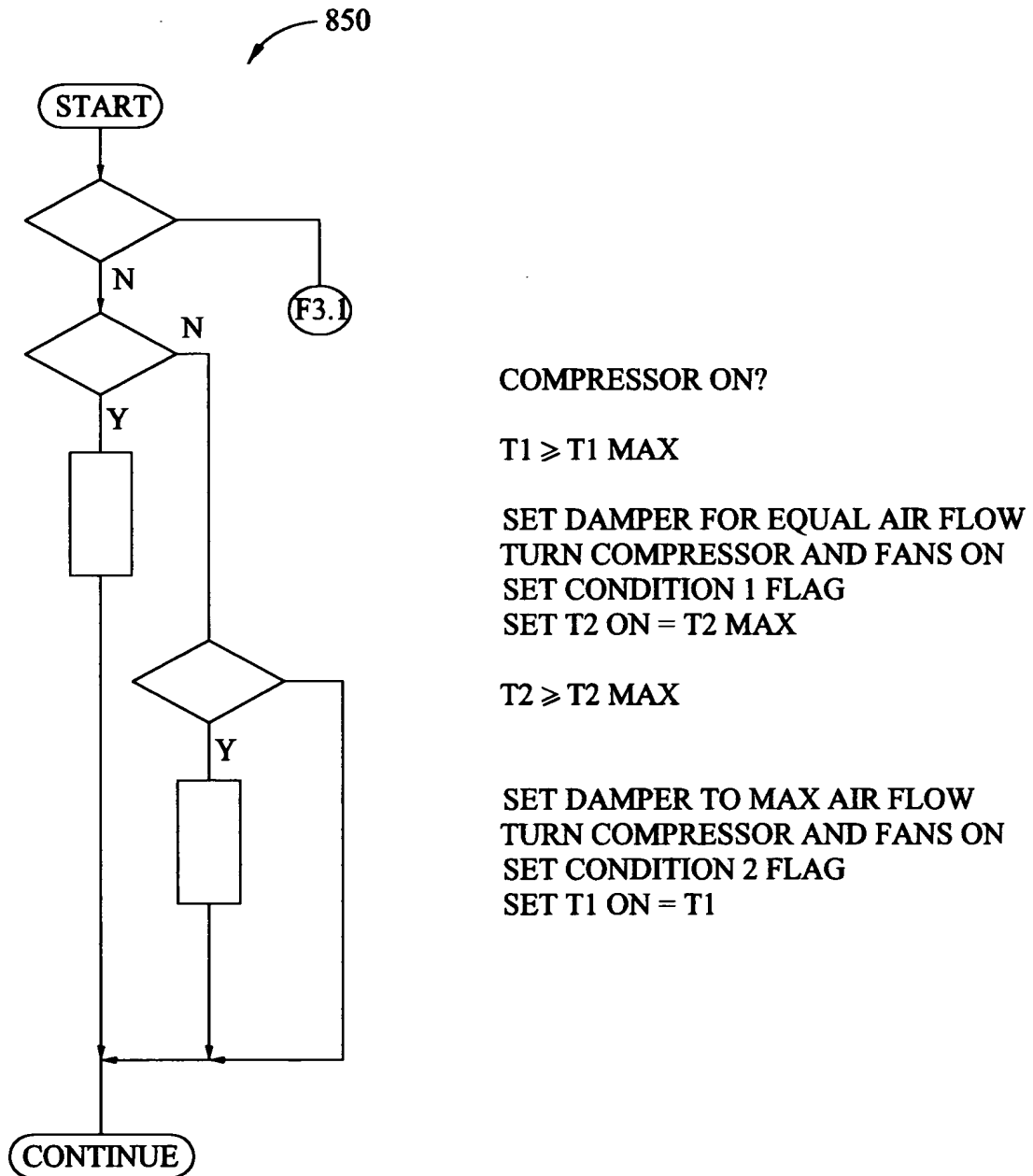


FIG. 53



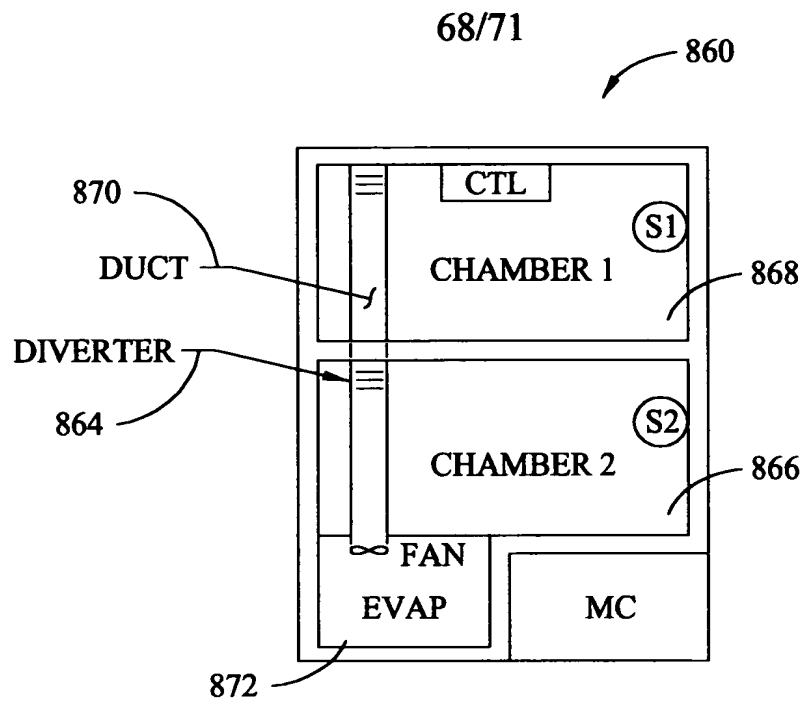


FIG. 55

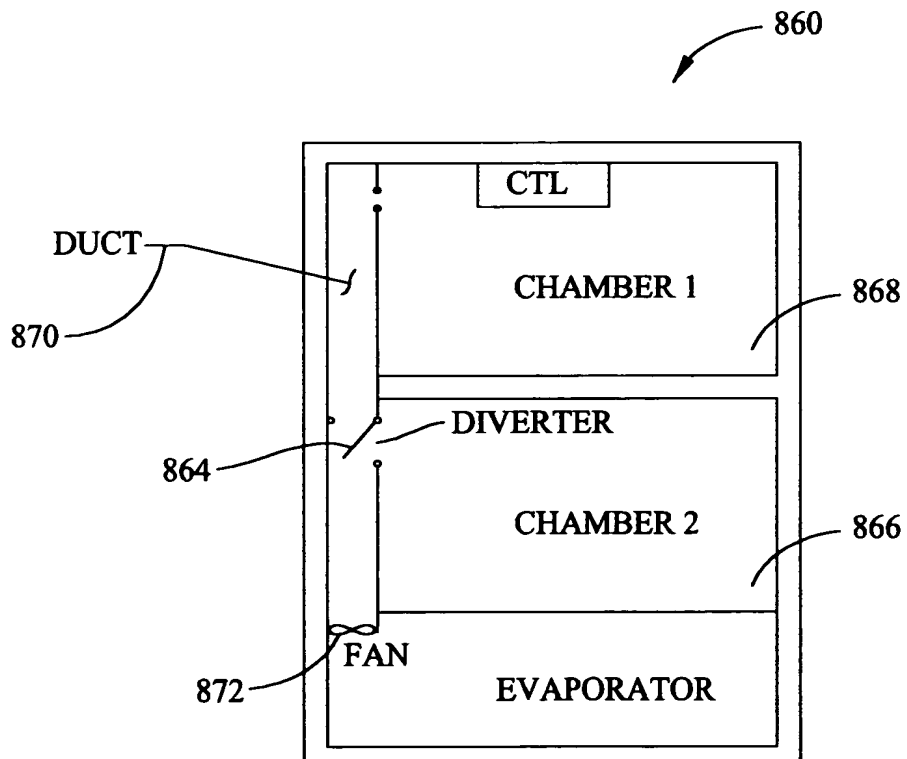
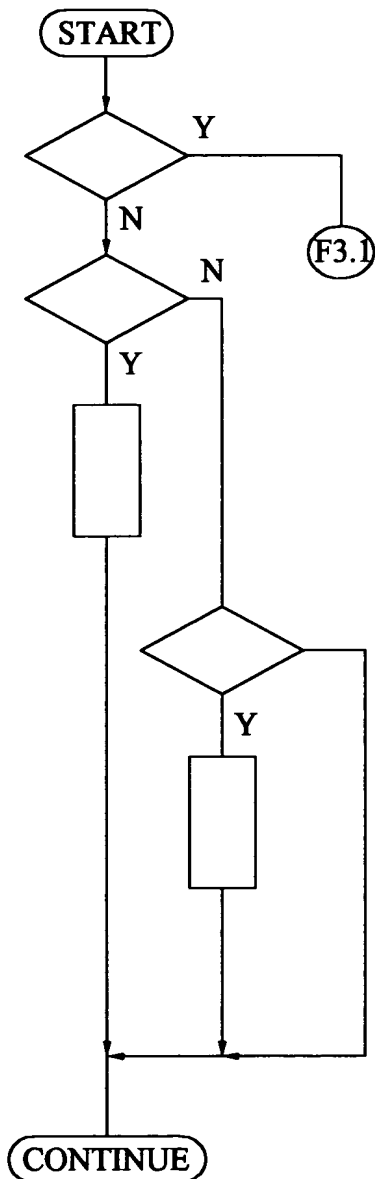


FIG. 56

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COMPRESSOR ON?

$T1 \geq T1 \text{ MAX}$

SET DIVERTER FOR EQUAL AIR FLOW
TURN COMPRESSOR AND FANS ON
SET CONDITION 1 FLAG
SET $T2 \text{ ON} = T2$

$T2 \geq T2 \text{ MAX}$

SET DIVERTER FOR EQUAL AIR FLOW
TURN COMPRESSOR AND FANS ON
SET CONDITION 2 FLAG
SET $T1 \text{ ON} = T1$

FIG. 57

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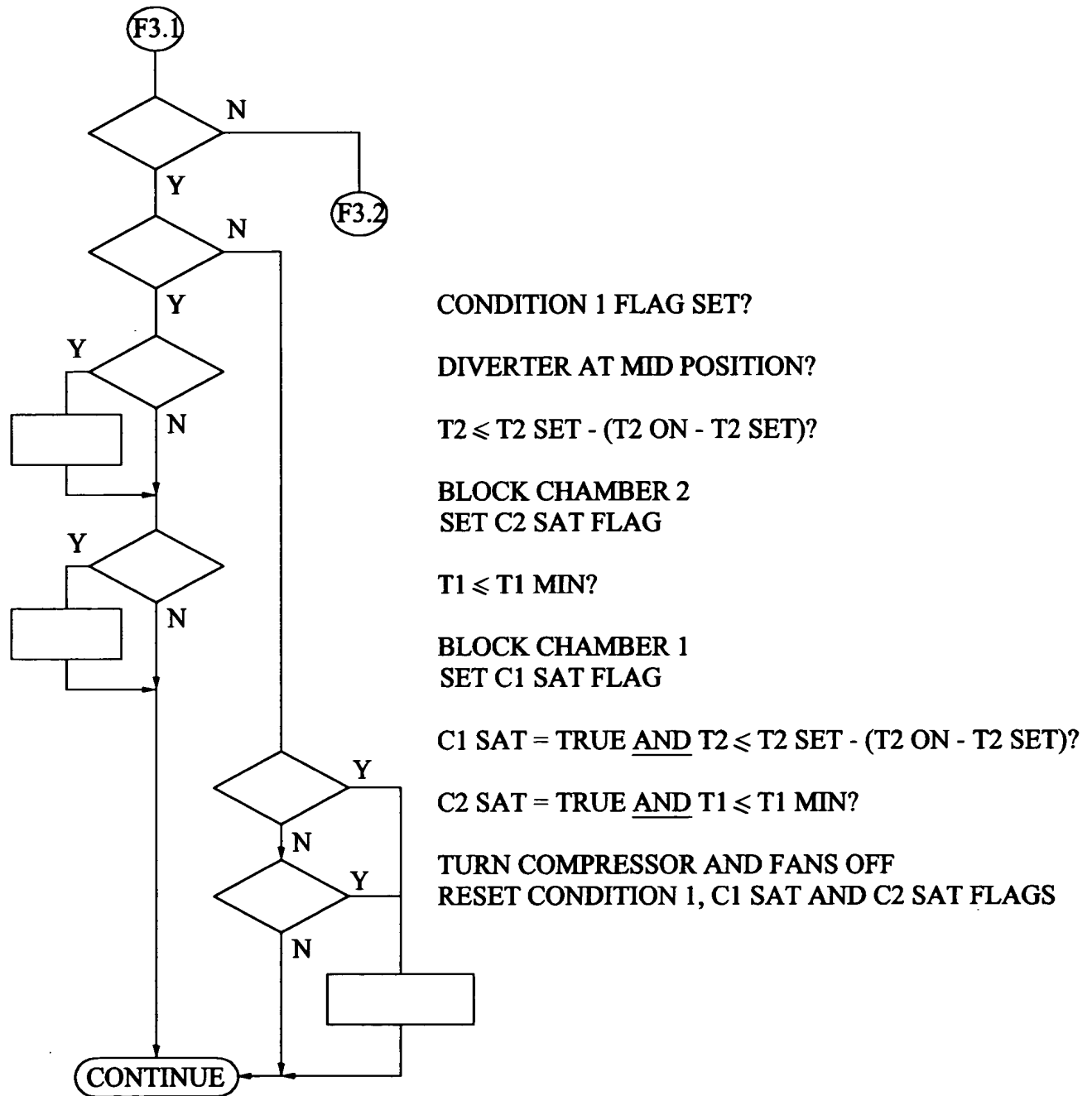


FIG. 58

